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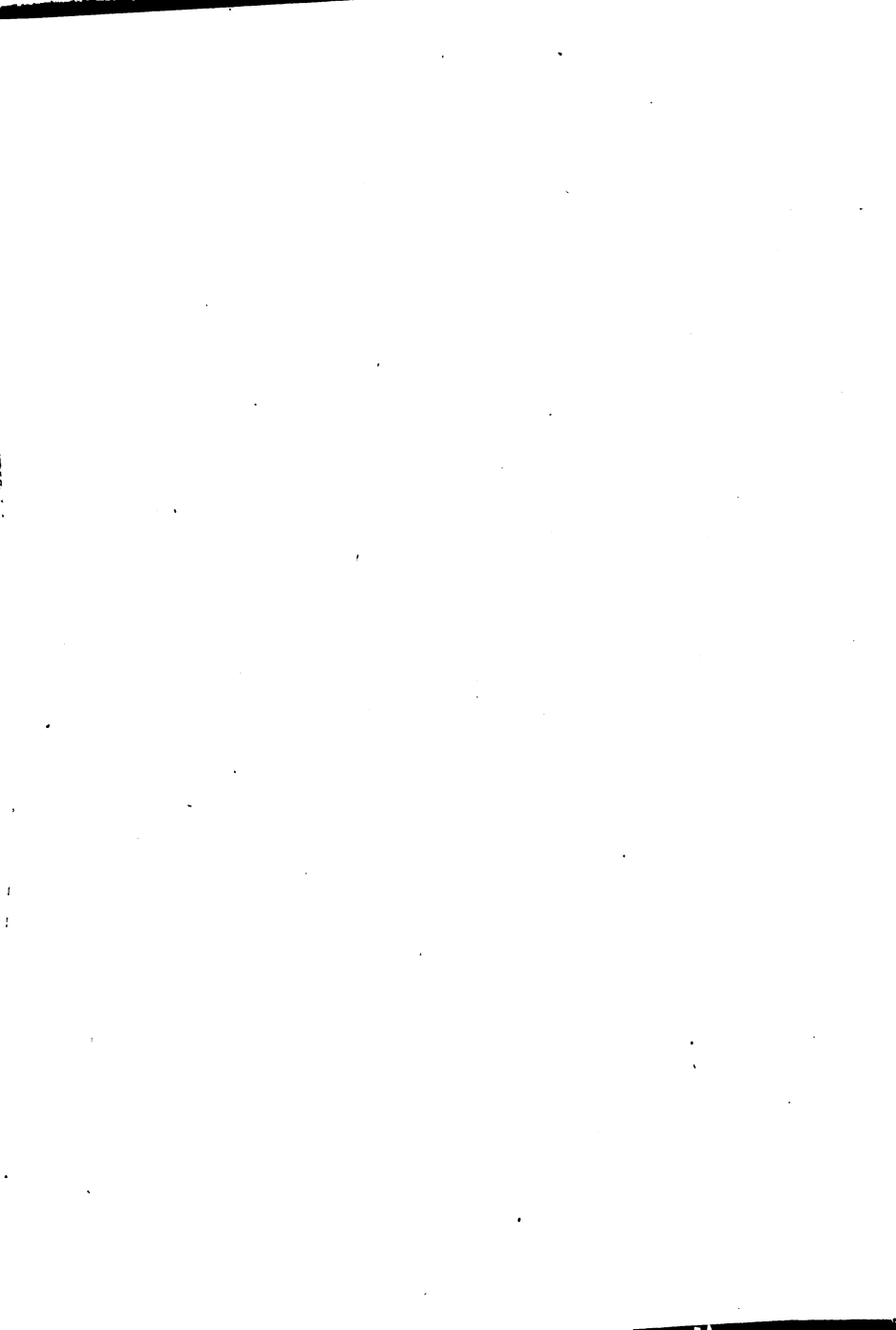
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AMERICAN ECONOMIC LIFE



THE MACMILLAN COMPANY

NEW YORK • BOSTON • CHICAGO • DALLAS
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MACMILLAN & CO., LIMITED

LONDON • BOMBAY • CALCUTTA
MELBOURNE

THE MACMILLAN CO. OF CANADA, LTD.
TORONTO

AMERICAN ECONOMIC LIFE

In Its

CIVIC AND SOCIAL ASPECTS.

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New York

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Set up and electrotyped. Published March, 1921.

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Norwood Press
J. S. Cushing Co. — Berwick & Smith Co.
Norwood, Mass., U.S.A.

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To
THE SPIRIT OF
ABIDING AMERICANISM
THIS BOOK IS
DEDICATED

462252



PREFACE

THIS book, a restatement of *Elements of Economics*, is an attempt to present in problem form the more important phases of American economic life. Based as it is upon twenty years of teaching experience in the general field of the social sciences, the writer hopes that it may prove not only teachable, but that its material may be found to be especially adapted to the needs of the elementary student of social science.

With this end in view, every effort has been made to secure simplicity of thought and clarity of expression. The material is carefully organized by means of the chapter outlines, while the topics arranged at the close of each chapter are intended to reënforce and illuminate the matter previously presented. This matter, since it is entirely elementary in character, is largely descriptive and illustrative. Although economic theory is duly recognized whenever it touches vitally the problem at hand, the main emphasis is always placed on the concrete problem, for the comprehension of which a knowledge of the theory is essential. Not theory, but economic life itself, is the objective in view.

Of even greater importance in determining the value of this work in secondary education is its emphasis upon everything truly American in the formation of national character. While the book is built around the industrial and economic factors in American civilization, its civic

and social aspects are everywhere recognized. In fact, every economic problem is approached from the civic and social standpoint. So interwoven are these phases of national development that no adequate treatment can be given any one of them without recognizing their close relationship and interdependence. Accordingly, this book is intended to appeal primarily to all those who believe that true training in American citizenship can be secured only by a properly correlated knowledge of the economic, civic, and social factors in American civilization.

H. R. B.

PHILADELPHIA, PA.,
March 1, 1921.

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AMERICAN ECONOMIC LIFE

PART ONE

INTRODUCTION

CHAPTER I

THE BASIS OF ECONOMICS

- I. Meaning of economics
 1. What it studies
 2. Kinds of wealth :
 - a. Material wealth
 - b. Immaterial wealth
- II. Characteristics of material wealth
 1. It is exchangeable
 2. It satisfies human wants
 3. It involves labor
- III. Free gifts of nature and economic goods
 1. Meaning of free gifts
 2. Meaning of economic goods
 3. Position of money
 4. Conclusion

Meaning of Economics. — The commanding position of economics in the world to-day and its vital connection with American life make it highly desirable for **What it** all wide-awake people to understand something **studies.** of this subject and to grasp clearly the basis upon which it rests. Economics arises from the study of material wealth

and investigates the problem of welfare. Welfare, from the standpoint of material well-being, is not possible without material wealth. Therefore, in order to understand the concrete basis of economics, we must have a clear conception of the meaning of wealth.

Wealth may be either material or immaterial. For example, houses, factories, food, and clothing are articles of material wealth; while health, capacity, and character are illustrations of immaterial wealth.

Kinds of wealth: Both kinds of wealth possess value, but immaterial differs from material wealth in that it cannot be subjected to the process of exchange; that is, immaterial wealth cannot be bought and sold like food and clothing. It is needless to say that immaterial wealth is of greater value than anything else in life. However, a study of this kind of wealth does not properly belong to the field of economics, but is a legitimate part of the science of education, or of psychology, or of ethics, or of some similar study. Nevertheless, when immaterial wealth is productive of material wealth, economics becomes indirectly interested in the solution of some of its problems. For example, if education produces efficiency and if efficiency results in the production of material wealth, economics acquires an indirect but vital interest in the growth of education. That is, just as wealth is a means of promoting welfare, so may education increase the amount of wealth produced by society.

Characteristics of Material Wealth. — Since economics is primarily concerned with material wealth, it is imperative for the student of economic problems to have a clear conception of its essential characteristics. In the first place, material wealth may be bought and sold;

that is, its ownership may be transferred from one individual to another. We have just seen that this characteristic distinguishes material wealth from immaterial wealth. The strength of a Hercules, the genius of a Shakespeare, or the honesty of a Lincoln can never be transferred from one person to another. On the other hand, the palaces of kings, the paintings of old masters, or the products of a steel mill may easily pass from the hands of one into the possession of another. It is always possible, therefore, for material wealth — no matter what its character or how high its value — to be exchanged for some other commodity of equal value.

But material wealth possesses something more than this element of transferability or exchangeability; it possesses the quality of satisfying human wants. Some things are easily transferred from one person to another, or from one place to another, and yet do not satisfy any individual want. For example, the dirt of the street is only too easily brought into the home, but it is not material wealth because it satisfies no one's want. However, this same dirt, needed by the contractor in large quantities, would satisfy an individual want and would in this case be regarded as material wealth. This want-satisfying quality possessed by material wealth is called utility. While degrees of utility possessed by different articles may vary greatly, yet all forms of material wealth must possess some utility. It may readily be seen that the necessities of life, such as food, housing, and clothing, possess the greatest possible utility; that is, they satisfy wants that are most intense and universal in all mankind. On the other hand, automobiles, books, or fine pictures satisfy wants that individuals have gradually

It satisfies
human
wants.

acquired, but that are not absolutely essential to life itself. In both cases, however, these different forms of material wealth possess utility; that is, they all satisfy, in a greater or less degree, the wants of mankind.

In addition to the qualities of exchangeability and utility, material wealth must possess still another characteristic.

It involves labor. The wealth with which economics is primarily concerned must involve human effort. Locomotives, footballs, chemical apparatus, maps, textbooks, clothing, and thousands of other commodities are all produced by man's conscious industrial effort; that is, they are all "economic goods."

In the same manner, in the production of commercial coal and iron and in the working up of other raw materials of industry, man's labor is an essential element in the process required for developing the finished product. When this element is lacking, the goods are not economic but free.

Free Gifts of Nature and Economic Goods. — When individuals appropriate gifts of nature, such as forests and minerals, they transform them through their industrial effort into economic goods. On the other hand, such free gifts of nature as air and sunshine cannot easily be appropriated, and, although they possess the highest possible utility, their existence is not the result of any human effort. Air and sunlight are not manufactured; therefore, we cannot properly regard them as economic goods. Water, on the other hand, while a free good in primitive society, becomes an economic good in the modern city, because human effort has been expended in building aqueducts, laying water mains, and in otherwise providing machinery for a water supply. Free gifts of nature tend to become economic goods; but, so long as

they remain "free," they do not constitute a part of that wealth with which the study of economics is primarily concerned. The main interest of the student of economics is, therefore, in economic goods.

From our previous analysis of wealth it may be seen that material wealth is a term applied to all economic goods; that is, to all those goods (1) which possess the power of exchangeability or the quality of transferability of ownership, (2) which possess utility or the power to satisfy human wants, and (3) which involve human labor or industrial effort. They are distinguished from free gifts of nature chiefly by reason of the fact that human labor has been expended upon them. But when man acquires ownership in natural gifts and expends labor upon them, they become economic goods because their ownership may be transferred from one person to another. This is at present the case with land in all highly civilized societies. Furthermore, the term economic goods is sometimes made to include not only commodities, such as wheat and petroleum, but personal services, such as those rendered by physicians, lawyers, and teachers. These personal services are treated by the economist as economic goods because, while they are not actually transferable, they may be offered for sale in every business community, that is, they may be exchanged for money.

The beginner in the field of economics must bear in mind not only this concept of economic goods, but he must also clearly understand the relation between wealth and money. One of the first errors into which he is likely to fall is the belief that these two are synonymous, and that, therefore, a study of economics is merely a study of "How to make money." Such a

Meaning of
economic
goods.

Position of
money.

misconception should be immediately corrected. Material wealth includes infinitely more than money, and the study of economics is therefore infinitely broader than an ordinary lesson in money-making. The popular misconception of the importance of money arises from the simple fact that money is employed by civilized societies as a standard for measuring the value of all economic goods and as a means of exchanging one form of wealth for another. Gold and silver, from which money is coined, are forms of material wealth; but so are iron and coal, furniture and clothing, food and drink, books and pictures, and countless other economic goods. It is, therefore, just as absurd to think of money as inclusive of all wealth as to think of one individual as embracing the human race.

Material wealth, then, is the concrete basis of economics. Without material wealth no science of economics would be possible. But a knowledge of wealth, in and

Conclusion. of itself, is not the highest aim subserved by a study of economics. Wealth is but a means to welfare, and the real purpose of the study of economics is to understand how welfare may be promoted through the medium of wealth. Accordingly, in our treatment of American economic life, we shall discuss (1) the ideals necessary to attain this goal of welfare; (2) the means of promoting welfare through the consumption, production, exchange, and distribution of wealth; and (3) the organized efforts of men to attain the economic goal for which society is striving.

QUESTIONS FOR RECITATION

1. What is economics? What is its distinctive characteristic?
2. Explain the difference between material and immaterial wealth. Is the gap between them impassable?

3. In what two respects are material and immaterial wealth alike?

4. Give two examples of immaterial wealth which might legitimately command the interest of the student of economics. Explain clearly.

5. Describe the characteristics of material wealth. Give an example of each.

6. What is the difference between free goods and economic goods? Give illustrations.

7. What is the relation between material wealth and money? Which is the more important? Why?

8. Discuss the relation between wealth and welfare. Which, if either, of these two ideas is more beneficial to society? Show by citing examples of each.

9. Must material wealth always possess the three characteristics mentioned in the chapter? Why?

10. Why are houses regarded as economic goods? Can they be transferred?

11. Why are economic goods sometimes made to include personal services? Are they exchangeable?

PROBLEMS FOR DISCUSSION

1. Compare the physical sciences with the social sciences, giving examples of each group and showing wherein the two groups differ.

2. Distinguish, by giving examples, between the problems of:
a. Economics and history. *b.* Economics and civics. *c.* Economics and sociology.

3. Discuss the effects of the World War upon the study of economics.

4. Explain clearly which of the following are, and which are not, economic goods:

- | | |
|----------------------------------|---------------------------------|
| <i>a.</i> Fish in the sea. | <i>g.</i> Air in the classroom. |
| <i>b.</i> Manhattan Island. | <i>h.</i> Air in a submarine. |
| <i>c.</i> Dandelion on the lawn. | <i>i.</i> A school building. |
| <i>d.</i> A prison. | <i>j.</i> Climate. |
| <i>e.</i> Opium. | <i>k.</i> A barber's services. |
| <i>f.</i> Niagara Falls. | <i>l.</i> Poison gas. |

5. Discuss the relative importance of money, roads, and food. Which could a nation do without the better? Why?
6. Name an American preëminent in wealth production; name another whose life has been devoted to the promotion of welfare. Discuss the services rendered by each to the community.
7. Is knowledge transferable? Is it material or immaterial wealth? What has the teacher for sale?
8. Explain the meaning of utility. Discuss its relation to material wealth. Is everything that possesses utility an economic good?
9. Name some things which are economic goods at one time, but not at another time. Tell why in each case.
10. Why is industrial effort a necessary characteristic of economic goods?

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CHAPTER II

THE GOAL OF ECONOMICS

- I. What is our goal?
 1. In play :
 - a. Success
 - b. Achievement
 2. In life :
 - a. The production of wealth
 - b. The promotion of welfare
 3. The old view and the new
- II. How to attain this goal
 1. Through opportunity :
 - a. Its meaning
 - b. Its possibilities in America
 - c. Its real significance :
 - (1) The older attitude
 - (2) The newer view
 - (3) An example
 2. Through adjustment :
 - a. Its meaning
 - b. Its existence in nature
 - c. Its never-ending character
 - d. Conclusion

What is Our Goal? — A football team may aim to pile up a big score, or it may aim to play a good game. The big score is success; the good game is achievement. **In play:** The team that aims to pile up big scores wants games with weak opponents; *Success or achievement.* but the team that aims to play a good game desires in its

adversaries equal, if not greater, skill. The "big-score" team triumphs, while the "good-game" team learns. The latter may lose every game of the season, and yet attain a proficiency in football far above that of the former team.

It is thus entirely possible to play ball for scores, or to play for the love of a good game. Exactly the same

*In life: The
production
of wealth.*

possibilities present themselves in the economic world, except that the choices are rather more numerous and complex. Here a man may strive for money, the counters of the economic game, and, like the miser, hoard them and gloat over them. Or he may overlook the counters and work for the things which the counters represent, — the wealth of society. In his struggle for the accumulation of this wealth, he may disregard the rights of others and put to shame his own ideals. His one aim may be to amass a great fortune, to possess great riches. If his purpose is merely to produce vast wealth, simply for the sake of that wealth and without regard for the rights of others, he is on the same moral plane as the ball player who is determined to win the game at any cost, even to the "spiking" of his opponent.

Many men, however, have as the chief object in life the attainment of progress, — a forward movement of the entire group to which they belong. If a large

*The
promotion
of welfare.*

group is striving for progress, civilization will be advanced and the welfare of each member of the group will be promoted. Of course, in order to attain this welfare, it will be necessary to use money and wealth in order to satisfy the wants of the individual; yet there is just as wide a difference between working for wealth and working for welfare as there is between playing ball for scores and playing to play a good game. In the

first case man works for counters; in the second, for development.

Economics is not merely "the science of wealth," but is becoming more and more "the science of welfare." The early idea of economic writers was that economic goods are the logical end of economic endeavor; that the nation which is producing economic goods in great abundance is a successful nation, irrespective of any other test. The newer view holds, on the other hand, that true advancement lies, not in the production of goods, but in developing the lives of men and women; and that, while this end may sometimes be achieved through the production of wealth, the production is merely incidental to the development of manhood and womanhood. Production is not an end in itself, but merely a means to welfare.

How to Attain This Goal. — Since the attainment of welfare — individual and social well-being — is the end of economic endeavor, it becomes the duty of society to provide the means to attain this end. Many conditions are needed to realize the goal of welfare, but there are two requisites of progress which appear fundamental. In order that man may attain that for which he is striving society must (1) provide opportunity for the individual, and (2) make the adjustments necessary for his progressive development.

Opportunity is an equal chance given to the members of each generation to become unequal. Far from signifying equality, opportunity involves only the thought that each person shall have an equal start. The "starter," who shoots the pistol for the mile run, does not make the runners equal when he insists that each start at the same time from the same mark. On

The old view
and the new.

Through
opportunity:
Its meaning.

the contrary, he gives the contestants a fair chance to show how unequal they are. Those who urge the necessity of opportunity are doing no more than the "starter," — insisting that each contestant in the race of life shall start, fully prepared, with an equal chance to do good work.

As a nation, America to-day presents rare opportunities. Contrast, for a moment, the conditions of the eighteenth century with those of the twentieth. In 1700 capital was scarce, living was precarious, and, in order to secure even the bare necessities of life, men, women, and children were forced to work hard and continually. To-day, however, the inhabitants of the United States have stored-up capital and a well-developed system of wealth production. The bare necessities of life and some of the comforts as well, can be supplied in an eight-hour working day for adults, while the children attend school. In 1700 the possibilities for opportunity were limited; to-day they have increased a hundredfold.

The real significance of this new opportunity is made clearer by the modern view of man's possibilities. Modern science justifies the belief that, within racial lines, most men are born approximately equal and normal; hence opportunity is the chief factor in human development. But this view was not always held. Even to-day some people believe in total depravity. Under this hopeless view of the human race, some men are depraved, sinful, wicked; others are shiftless, lazy, inefficient, and poor; while only the fortunate ones are wise, capable, and efficient. During the centuries when this view was prevalent, birth was looked upon as the determining factor in human development. This attitude toward life was an attempt to justify existing conditions;

Its possibilities in America

Its real significance.

it led to submission and despondent resignation. It was all but fatalistic.

In the course of time, however, thinkers arose and proclaimed the doctrine of man's natural capacity. Such men talked of the right to life, liberty, and the pursuit of happiness, and asserted that all men are created free and equal. Equalize opportunity, proclaimed these "free and equal" thinkers, and, to a great extent, you equalize achievement. Birth — heredity — was no longer the key to the situation; this was now to be found in opportunity and environment. This view of human life is full of promise and inspiration, transforming men from fatalists into enthusiastic workers. According to its teaching, perhaps nine-tenths of all men and women, in a given grade of civilization, are born with about the same capacity to do good work.

Take, for example, two boys of equal ability, born on the same day. In the course of their lives, one is sent to high school and college and does splendid work in the world; the other is badly fed, poorly clothed, and sent into a cotton factory at an early age. The first boy, because he had a chance, developed in exactly the same way that the second boy would have developed had a chance been given to him. An overwhelming majority of people, like these two boys, are normal at birth and, if given an opportunity, will lead normal, happy lives.

To make opportunity more effective, society must make certain changes in ideas and conditions that have been inherited from a far distant past. This process of changing past conditions so that they will meet man's present needs is called social adjustment. For example, it is not sufficient that society pro-

Through
adjustment:
Its meaning.

vide young men and women with an opportunity for education. This education itself must suit the needs of the present-day individual. If the education offered is out of harmony with the needs of the time, the opportunity provided fails of its real purpose. Under such circumstances society must make an adjustment in education; that is, it must change, for this work-a-day world, the old idea that education must *always* take the form of pure culture and learning. In other words, our educational system must be reorganized if it does not meet the requirements of the new age. This is accomplished by the process of social adjustment which aims to bring about a normal relation between man and his social environment. However, it is the environment, not the individual, which suffers this change. The aim of social adjustment, therefore, is to change unfavorable conditions so that men and women may be free, when provided with opportunity, to realize life's full possibilities.

The phenomenon of adjustment is seen in nature as well as in society. A river, for example, adjusts itself to the changes in earth formation. If a mountain range is thrown up, the river wears down its bed until, flowing at a normal gradient, it has created a cañon of the Colorado. But the river is not content. It continues its work, cutting away the surrounding hills, until it flows through a great plain like the Mississippi Valley. Society, like the river, seeks to adjust itself to the changing contour of the environment by wearing it away, and smoothing it down, until a normal relation is established between men and their surroundings. It accomplishes its purpose by means of men and women all working together, coöperating to remove the obstacles in the path of progress.

The process of adjustment is continuous because the normal is always changing. The unattainable of one age is the attainable of the next. Through science, invention, education, and the creation of surplus wealth, the dreams of the past, — the abolition of slavery, freedom from overwork, from cold and hunger, from famine and pestilence, — become the realities of the present. Thus the possibilities of human life are ever widening.

Men and women, therefore, who have the welfare of society truly at heart are continually striving to shape social conditions so that every one may be happiest and most effective. If enough people work for such an end, the full possibilities of society will be realized and the normal for that community will be attained. But to arrive at this goal of economic life — to realize individual and social welfare — society must not only secure adjustment, but it must also provide opportunities for all its members.

Its never-ending character.

Conclusion.

QUESTIONS FOR RECITATION

1. Do you want your school teams to win at any cost? Explain your answer.
2. Is it possible to attain both success and achievement? How?
3. Explain the difference between the production of wealth and the promotion of welfare. Show how the former is necessary to the latter.
4. What has economics to do with the promotion of welfare? Was this view always held?
5. Define opportunity.
6. Give original examples of opportunity.
7. Explain the possibilities for opportunity in the United States. What has the United States yet to accomplish in this direction?
8. Why do modern views of life enhance the importance of opportunity? Explain clearly.
9. Define social adjustment. Give examples.

10. How is it accomplished?
11. How does Nature bring about physical adjustment? Give examples.
12. Show clearly why the process of social adjustment is never-ending.
13. At what periods in our history have we had the most important social adjustments? Why?

PROBLEMS FOR DISCUSSION

1. Discuss life's true goal. Give examples from great men of history.
2. What good does the miser do society? The tight-fisted business man? The public-spirited worker?
3. What choices in life are open to you? Which will you take? Give your reasons.
4. Would you, or would you not, be willing to take an easy job with a big salary? Why or why not?
5. What great industrial leader appeals to you? Why?
6. Contrast your present opportunities with those that would have been open to you had you been born in China.
7. Should any limit be placed on opportunity? State your reasons.
8. Would not the opportunity of the few be limited if opportunity were provided for the many? Explain.
9. Contrast individual with social adjustment. Give examples.
10. Explain the most important social adjustments needed in America to-day.
11. Contrast India with the United States in regard to social adjustments. Give examples.
12. How do you regard prohibition and woman suffrage? Why?

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CHAPTER III

ECONOMIC IDEALS

I. Efficiency

1. Its meaning
2. Its importance :
 - a. To the employer :
 - (1) Examples
 - (2) How measured
 - b. To the worker :
 - (1) Grades of workers
 - (2) A great danger
 - c. To the nation :
 - (1) Why necessary
 - (2) An example
 - d. To the family :
 - (1) Why important
 - (2) The new movement
3. How secured

II. Conservation and thrift

1. Meaning of conservation
2. Its threefold aspect :
 - a. Conservation of natural resources :
 - (1) Forests
 - (2) Minerals and water power
 - b. Conservation of industry
 - c. Conservation of vitality :
 - (1) Health
 - (2) Life
3. Thrift :
 - a. Meaning and necessity
 - b. The great gain
4. Conclusion

Efficiency. — Efficiency is the capacity to secure a maximum return for a minimum outlay. Hence, one man is more efficient than another if, with a given expenditure of energy, time, and material, he can produce a larger or better result than the other. For example, where two men are making Belgian blocks, one produces sixty, while the other, during the same period of time and without putting forth any additional effort, makes a hundred. The first man is clumsy with his hammer; the second makes every blow count. The second man is therefore more efficient than the first.

Every progressive employer is interested both in his own efficiency and in that of his workmen. In fact, the efficiency of his employees is a measure of his own capacity; for, unless he secures a maximum return for a minimum outlay of administrative ability, he himself is inefficient. If he has a man soldering lanterns who makes ten motions to the lantern, while the job can be done in eight, he is losing some product every hour of the day through this man's inefficiency. Or, if he is using old, out-of-date machinery when more effective machinery can be secured, or if his business has not been scientifically systematized, he is inefficient because he is failing to secure a maximum return for a minimum outlay.

So important has become this principle of efficiency that the success of the business man is measured in terms of this principle. The term "scientific management of industry" is employed to denote the extent to which this principle is recognized in the management of large undertakings. The old haphazard way of doing business has disappeared from all progressive establishments. Large sums of money are paid for the services of "efficiency experts," whose duty

Its meaning.

Its importance: To the employer.

It is to devise the most effective methods of conducting the business and turning out the product. Workers themselves are tested by tracing their curves of efficiency, so that production may reach its greatest volume. Indeed, in modern large-scale production, one of the chief functions of the head of a great organization is to find "the right man for the right job" in order that the best and the greatest industrial results may be achieved.

The worker is no less interested in efficiency than his manager, because his welfare is equally dependent upon it. Workers are divided into groups, whose boundaries are measured in terms of efficiency. *To the worker.*

At the bottom are those who are living on the ragged edge of existence, who are always losing their positions because of their inefficiency. Then come those who "stick," who retain their positions but never rise. Next come those who advance, but slowly. Finally, at the top, are those workers who are always advancing and progressing because they are always increasing their efficiency.

It is well here, however, to remember that the ideal of efficiency, like many other desirable principles, may be subverted to wrong purposes. This occurs in what is known as the "speeding up" process, in which the health of the workers is sacrificed for increased production. Efficiency secured at the cost of human health and happiness is not efficiency at all. By breaking down the worker and thus ultimately curtailing his power of production, such so-called efficiency defeats the very purpose for which the true ideal exists. The immediate product, therefore, is not always the true test of real efficiency.

Efficiency may also be considered from the standpoint of the nation. Uncle Sam may well ask, "Is this country

efficient? Are all our industries doing efficient work? Are our railroads efficiently managed? Is our school system an efficient one?"

But why these questions?

Because, in the general reorganization of international industry necessitated by the changes of the World War, *To the nation.* it is imperative for the United States, if she would realize the full possibilities of the new era, to stand first in national efficiency. In the struggle for world markets and in the demand for increased production, the United States can attain the commanding position, which her natural wealth justifies, only by insisting upon the highest ideals of national efficiency. Production must reach the largest volume consistent with national well-being; goods must be efficiently distributed through the arteries of commerce; foreign trade must be organized in the most effective manner; and industrial education must reflect the ideals of the new period.

Many good illustrations of what has been accomplished through national efficiency may be taken from American industries which have really reached the stage of international organization. One of the greatest of these is the United States Steel Corporation. In this business, industrial efficiency has attained such a high degree of development that world markets have been provided for its product. American steel rails not only compete with the English product, but at times drive that product from its home market. But here again, we should remember that such a dominating position ought not to be attained through false efficiency that disregards the best interests of the labor employed in the industry concerned.

Finally, we may look at efficiency from the standpoint

of the home. If it is necessary that the father be able to produce efficiently in order to support his children, it is no less necessary that the mother buy and keep *To the* house efficiently, in order that the income of *family.* the father may be used in the most advantageous manner. Efficiency in the home is just as important as efficiency in the factory, — more so, perhaps, in view of the many bad digestions and spoiled dispositions that have grown up with inefficient home management.

Many evidences are seen to-day of attempts to secure this efficiency in the home. In our educational system the movement extends all the way from the primary system to the institutions of higher learning. In the elementary schools we find courses in cooking and sewing; in the high schools, domestic science courses; and in the colleges and universities, courses in chemistry, food-values, and allied subjects. Household budgets are studied so that limited funds may be spent to the best advantage, while among social workers special attention is paid to giving informal instruction to families of the poor in "household efficiency."

No matter, therefore, from what standpoint we view this question we see its far-reaching importance; and it acquires this importance because social welfare depends largely on efficiency. When a nation is efficient, producing many goods cheaply and easily, *How efficiency is secured.* it creates the possibility of universal prosperity in which all may share. How, then, may this efficiency be secured? An analysis of this problem will show that education alone can make certain the realization of this ideal. Here, however, it may be necessary to revise our ideas of education. Certainly the efficiency for which we are striving cannot be secured from that traditional idea of education

which exalts culture at the expense of useful knowledge. By education for efficiency we mean that technical and specialized training which every individual must possess in order to discharge life's imperative duties.

Conservation and Thrift. — Conservation means wise use. It is the complement of efficiency. Efficiency is

Meaning of conservation. measured by a maximum of results; conservation, by a minimum of waste. For example, in former days, when business was conducted on a

small scale, each establishment had a certain amount of waste product that was discarded as useless. Now the giant corporation utilizes wisely this former waste, so that, by proper conservation, it is converted into valuable by-products of industry.

In the public mind, however, conservation is most closely associated with our natural resources. Here it was

Its three-fold aspect: that Theodore Roosevelt idealized this movement in American life. He saw at once the great danger to the nation that would result from the wanton waste of natural resources and from their exploitation for private gain. He brought the nation to a realizing sense of the great danger confronting it and, thereby, saved it from becoming victimized to extravagant waste and private monopoly. But the term conservation may be applied not only (1) to natural resources, such as minerals, forests, and water power, but also (2) to industry, and (3) to vitality.

The conservation of natural resources began with the care of forests, which were so ruthlessly destroyed from colonial times to the end of the nineteenth century. Forests had been literally "butchered," — all trees, young as well as old, being cut or destroyed. Then, too, forest fires of terrible proportions

Conservation of natural resources.

raged every year throughout different areas, destroying lives and property, as well as completing the forest destruction which the timber butchers had begun. Gradually, as the forests disappeared and the price of lumber rose, it became apparent that, unless the forest waste was stopped, a time would come, and that very shortly, when there would be an appalling shortage of lumber.

Although the idea of conservation of natural resources related originally to forests, it has been expanded until, to-day, the nation is fully aroused to the necessity of conserving all of its natural wealth. Forests, even if permanently destroyed, might be replaced, but minerals are not replaceable; and water power, upon which industry must more and more depend as coal rises in price, may be monopolized and taken out of the hands of the people. Everywhere, therefore, conservation is essential.

Industry, too, offers opportunities for the conservationist. For years, mining companies threw carelessly aside the finer bits of anthracite coal which have since *Conservation of industry.* proved of such value in making steam for office buildings and factories. The refuse from slaughterhouses, formerly thrown away, is now converted into a score of different kinds of products in great packing houses that "use every bit of a hog except the squeal." Hoofs, horns, hair, bristles, bones, blood, sinews, fat, hides, intestines, — all have some destination; while the refuse which remains is converted into fertilizer. New inventions, perfected devices, new processes of manufacture, all help in the conservation of industry.

Most important of all is the conservation of human life. Long ago Ruskin pointed out that men and women are a nation's greatest asset. So long as children are sacrificed

to factories, so long as men and women toil at the expense of health and rightful development, and so long as the *Conservation of vitality.* public health is sacrificed to ignorance, man will never attain the goal of welfare. Hence, if a nation would be truly efficient and happy, it must use wisely the men and women of each generation. This conservation of vitality may take the form of conserving health or of conserving life.

If sick people cannot do their best work, a nation of sick people can scarcely be described as efficient. In the United States, it has been estimated that the average adult is sick in bed four or five days during each year; while headaches, colds, and such minor ailments keep him from work another three or four days. If, then, there are thirty million adults at work and each one loses seven days a year, the total loss, irrespective of the loss of health and the cost of drugs and medical attendance, is two hundred and ten million working days each year. If half of this sickness is preventable, the nation is deliberately losing more than a hundred million working days annually because of its failure to adopt the simplest health precautions, such as clean water, pure milk, clean streets, and airy houses.

In the same way, the average length of life might be greatly increased by preserving health and preventing accidents. Perhaps half of the deaths occurring annually in the United States are preventable and would be prevented if a wise conservation policy were adopted. At present, the average length of life in the United States is from thirty-five to forty years. It might be seventy.

Another form of conservation is found in the ideal of thrift. With the advent of the World War in 1914, this

ideal came to occupy a prominent place in American economic life. As the struggle progressed, it became increasingly evident that the United States would have to send food and other necessary supplies to those European nations that were fighting to maintain the supremacy of democratic ideals.

Thrift:
*Meaning
and
necessity.*

To do this, it was necessary for the nation to practice economy and to use wisely its abundant wealth. Everywhere was seen the slogan "Food will win the war." The nation learned anew how to save by practicing economy and by submitting to voluntary rationing. When the war was won, the depletion of the world's resources further emphasized the need of thrift. The necessity to "work and save" became still more apparent to all thoughtful men.

The great gain to the American people from this lesson of war was found, not only in curbing social extravagance, but also in the general discovery of the practical value of the power of substitution. Heretofore, men had become accustomed to use such staple articles of food as wheat, beef, and sugar, and to feel that no other foods could serve as substitutes for them. With continued practice, however, they soon came to realize that corn could be substituted for wheat, pork for beef, sirup for sugar, and rice for potatoes.

*The great
gain.*

From this general survey of efficiency, conservation, and thrift, the student of American economic life must see the tremendous importance of individual action in promoting social welfare. It is not sufficient for society to provide men and women with opportunities; nor yet to make the adjustments, in order that the opportunities offered may meet the needs of the present time.

**The con-
clusion.**

These are only the first steps toward the attainment of social welfare. The individual himself must hold to high standards of efficiency; he must insist upon high ideals of conservation; and he must practice economy and thrift. In spite of all that society may do for him, if man is inefficient, extravagant, or wasteful, he will never attain the goal of economic welfare.

QUESTIONS FOR RECITATION

1. Define efficiency.
2. What is meant by a "maximum return"?
3. What is the difference between true and false efficiency?
4. Give examples of false efficiency.
5. Give examples of true efficiency.
6. Explain the importance of efficiency to:
 - a. A railroad president.
 - b. A salesman.
 - c. The modern housewife.
 - d. The national government.
7. Define conservation. Name three kinds.
8. Why is conservation needed?
9. Give examples of conservation.
 - a. In natural resources.
 - b. In vitality.
 - c. In industry.
10. If conservation benefits the future only, how can it be justified?
11. What is thrift?
12. Is the miser thrifty? Explain.
13. Why is thrift necessary?

PROBLEMS FOR DISCUSSION

1. Discuss the relative importance of different economic ideals in the United States to-day.
2. Compare idealism with materialism as a factor in national development and in world politics. Give examples from history.

3. Compare British efficiency with American efficiency. Give examples.
4. Discuss the idea of German efficiency before the World War.
5. Give the history of the conservation movement in the United States.
6. Discuss the evils of the private monopoly of mineral lands and water-power sites.
7. Apply the principle of conservation to mankind.
8. Compare France, Holland, and the United States in regard to the practice of thrift. Give illustrations.
9. Discuss the importance of thrift to:
 - a. The family.
 - b. Industry.
 - c. The nation.
10. Theodore Roosevelt said, "Thrift is common sense applied to spending." Apply this to your own everyday expenditures.

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CHAPTER IV

PROSPERITY

- I. Nature of prosperity
 - 1. Its meaning
 - 2. Its dangers
 - 3. Its twofold character
- II. National prosperity
 - 1. China and United States :
 - a.* Population
 - b.* Race
 - c.* Natural resources
 - d.* Industrial development
 - e.* Transportation facilities
 - f.* Tradition
 - g.* Control over environment :
 - (1) In regard to rivers
 - (2) In regard to food
 - 2. Surplus wealth :
 - a.* Its meaning
 - b.* Forms
- III. Individual prosperity
 - 1. Its importance
 - 2. An example
 - 3. Conclusion

Nature of Prosperity. — Material wealth is the basis of national well-being. A people who are inadequately nourished, poorly housed, improperly clothed, and denied the legitimate means of securing health and recreation, cannot be said to enjoy material

well-being. This condition can be brought about only through the medium of prosperity. Prosperity, therefore, signifies an abundance of economic goods. It is an indication of welfare; just as fame and honor are signs of great achievement. In this sense, it is an ideal to be realized in exactly the same manner as efficiency and conservation.

In the attempt to attain a condition of prosperity, as well as in its actual realization, man is often exposed to certain grave dangers. Just as a false efficiency may be secured at the expense of the worker, so ^{Its dangers.} an unbalanced prosperity may be attained at the cost of individual well-being. Prosperity may be confined to the few, while poverty engulfs the many. Furthermore, when this prosperity is once attained it may be made to serve wrong purposes; it may even result in moral degeneration. In great moral crises, a nation must never think simply in terms of material wealth. A prosperous nation must be a nation of strong moral fiber, willing to undergo temporary sacrifices for the sake of abiding principles.

Prosperity, therefore, should not be regarded as an end in itself; it is merely an instrument for the betterment of the human race. Hence, it is important to ^{Its twofold character.} distinguish between national prosperity and individual prosperity. The true material happiness of a people depends upon individual prosperity. It is not sufficient that a nation's exports increase in volume, and that its competitors be driven from foreign markets. The wealth of the nation must be absorbed by the masses themselves up to the point necessary for their material comfort. First of all, therefore, we shall discuss the basis of national prosperity, because from it should naturally flow individual prosperity.

National Prosperity. — The meaning of national prosperity may be more clearly grasped by a contrast between China and the United States. The first is a land of wants; the second, a land of plenty: the one is a nation of deficit; the other, a nation of surplus. Here are two countries — China and the United States — equally endowed by nature and yet differentiated by the extremes of poverty and prosperity. What has brought about this wide divergence? Why has one nation been denied, and why has the other almost attained, the goal of welfare? To solve this problem, we shall examine briefly these two countries from the standpoint of their population, their natural resources, their industrial development, and their ideas and beliefs.

In China there are four hundred million people, or almost four times as many as there are in the United States. If the whole population of the United States and forty millions more were to move into the State of Texas, they would be about as close together as are the people in the Yang-tse-kiang Valley of China. It would not be right, therefore, to charge China's lack of prosperity to a scarcity of labor.

The Chinese belong to the Mongolian race. They are physically smaller than the Caucasians of our own land; but the experience of the last fifty years in the development of Japan, whose people are admittedly not above the Chinese in capacity, has shown that intellectually the Mongolians are at least the equals, if not the superiors, of Western races. Within a generation the Japanese acquired a knowledge of industry and science that the Western races labored two hundred years to develop. In the Russo-Japanese war, the Japanese

loss through disease was almost nothing; while among the Russian troops in that war, the American troops in the Spanish-American War, and the British troops in the Boer War, the death roll from disease was appalling. This is only one instance in which the Japanese have bettered their instruction and thereby proved the inherent capacity of the Mongolian race.

China possesses natural wealth equal, if not superior, to that of any like area in the world. The country is magnificently watered. The Yang-tse-kiang, *Natural resources.* three thousand miles long, is navigable to ocean-going vessels for eleven hundred miles. The Hoang-ho, two thousand six hundred miles long, is connected with the Yang-tse-kiang by the Imperial Canal; and these two rivers and the canal form one of the finest water systems in existence. The climate of China is very similar to that of the United States. Minerals exist in abundance. It is believed that the bituminous and anthracite coal fields of China contain as much coal as those of all the other countries of the world combined. China's poverty, therefore, cannot be attributed to a lack of natural resources.

In Chinese manufacturing, machinery has not generally replaced human energy; consequently only those things which will sell at a high price, — such as silks *Industrial development.* and fabrics of various kinds, — are generally made. In spite of the fact that the people are apparently so naturally capable and numerous, and the natural resources so abundant, the industries of China are practically undeveloped. Despite its native abundance, iron is imported, although proper methods could produce iron in China as cheaply as in any other place in the world. Coal is mined in very limited quantities and by the use of appli-

ances so costly and inadequate that only the rich can afford to buy it. In her industrial development, therefore, China is immeasurably inferior to the United States.

Chinese transportation facilities, except on the waterways, are so inadequate that a bulky commodity, like coal, cannot be shipped for any distance before its price has become prohibitive to all except the very wealthy. This constitutes an important factor in China's poverty. For here is a land full of capable people, abounding in natural resources, but without industry and transportation, and therefore in constant danger of want. Crop failure in a district remote from water transportation means starvation. There are few railroads; the roads are bad. People suffer from hunger within a few hundred miles of an abundant supply of food, because there are no means of transporting bulky commodities.

It is, therefore, true that the backward condition of China is due to a lack of organized industry; but the absence of this industry itself is due, in large measure, to a blind worship of custom. "My father used this tool" is a conclusive argument in the ears of the son, and he uses the same tool without question. The people of the United States, however, have always developed industry irrespective of tradition, because they know that only through the breaking of tradition can progress sometimes be made.

Because of the powerful influence of custom and tradition upon the Chinese people, national progress and prosperity have not been attained. In the United States exactly the opposite condition prevails. By discarding tradition, the American people have developed their resources and controlled their en-

Transportation facilities.

Tradition.

Control over environment.

vironment; the Chinese have not. Instead of letting nature dominate them, the people of the United States have learned, in a large measure, to dominate nature. If the Mississippi overflows its banks, as it sometimes does, the people are not drowned by the tens of thousands, because, long before the break occurs or the water reaches a town, the news of the coming flood has been sent over telegraph wires and the people are prepared to meet it, or else have left for places of safety. As a rule, however, the Mississippi is not allowed to overflow its banks, although it is in somewhat the same position as the Hoang-ho, flowing in a channel which in many places is above the level of the surrounding country.

The control of Americans over their environment may be seen in another direction. The Chinese depend upon one crop — rice. If the rice crop fails, the Chinese starve. The people of the United States, however, do not depend upon one crop. A great part of their food is derived from wheat; but through the development of the milling industry, the beef industry, the canning and preserving industry, and the use of corn, it has been possible to live successfully through a national crisis without being in immediate danger from starvation. This was clearly demonstrated during the period of the World War, when so much American wheat was shipped abroad.

The net result of this power over the physical environment — this control of natural resources — secured by discarding age-long traditions is the creation in the United States of a vast quantity of surplus wealth. Whereas, throughout the centuries, China's traditional methods have barely produced sufficient wealth for current consumption, America's enlightened

Surplus
wealth:
Meaning.

processes of production have created, over and above what is needed for present use, vast quantities of economic goods for future consumption. That is, in the United States, all the products of industry are not consumed at once — part is set aside for future needs or for aiding future production. This constitutes surplus wealth and guarantees national prosperity.

The development of surplus wealth is one of the great steps in civilization. America, as contrasted with China,

Forms. has vast masses of this surplus wealth stored up in the form of railroads, factories, machine-shops, ships, automobiles, food products, and canned goods. These things, accruing year after year, serve to increase the productive efficiency of the people and to render them more capable of supplying themselves with the goods they desire. Not only does this surplus, stored up and added to year after year, guarantee the nation against starvation and want; but, in addition, it supplies men with the comforts and pleasures of life. Mechanical inventions, one form of surplus wealth, have enormously broadened man's possibilities of life.

Individual Prosperity. — Since the true end of national prosperity is individual prosperity, national wealth is of little real value unless it is distributed among the individuals composing the nation. The United States is immensely wealthy; great quantities of additional wealth are produced each year; and increasing capital enlarges the possibilities of future wealth production. But it is not enough to state that the country is rich. What becomes of these riches? If a considerable proportion of this wealth is concentrated in the hands of a relatively small group of people, the average individual

Its importance.

may be no better off than if this vast surplus of wealth did not exist. The nation must pass prosperity around.

Charles Dickens draws a sharp contrast between national and individual prosperity. In "Hard Times," Mr. Mc-Choakumchild, the schoolmaster, who is teaching political economy, says: "Now this school-
An example.
room is a nation and in this nation are fifty millions in money. Girl number twenty, is not this a prosperous nation, and ain't you in a thriving state?" And girl number twenty, the daughter of a circus rider, replies that she cannot say whether or not it is a prosperous nation, and whether or not she is in a prosperous state until she knows who has the wealth and whether any of it is hers.

The United States cannot be truly prosperous and we as individuals cannot be well off, unless all of us share in the national prosperity. The real test of prosperity
The conclusion.
must be, not national wealth, but individual welfare. The goal of economics cannot be attained until each individual in society is consuming a sufficient quantity of goods to insure him health and productive capacity; that is, until his income is sufficient to maintain a standard of living consistent with good health and efficiency. Therefore, in order to test the extent of individual prosperity in the United States, we shall now turn our attention, in the succeeding chapters, to the problems of wealth consumption.

QUESTIONS FOR RECITATION

1. Compare China and the United States in regard to their similarities.
2. Contrast their differences.
3. What is the fundamental reason for the poverty of the one and the prosperity of the other?

4. Explain the dangers of national prosperity.
5. What is surplus wealth?
6. State clearly the relation between surplus wealth and national prosperity.
7. Give several forms of surplus wealth in the United States.
8. What are its good results?
9. How does it originate? What is the relation between thrift and surplus wealth?
10. Define prosperity. Explain the two kinds of prosperity.
11. What does national prosperity primarily desire — wealth or welfare?
12. Why is individual prosperity so important?
13. How may individual prosperity be attained?
14. Why should a nation desire prosperity?

PROBLEMS FOR DISCUSSION

1. Discuss the changes taking place in China to-day.
2. Show the relative importance of man and nature in creating national prosperity. Give illustrations from typical nations.
3. Show the relation between national adversity and the "one crop system." Discuss Ireland in this connection.
4. What accounts for the backwardness of the Mediterranean countries?
5. Discuss the effect of war upon surplus wealth.
6. Discuss the effects of the Industrial Revolution from the standpoint of surplus wealth.
7. Explain surplus wealth in terms of production and consumption.
8. Discuss the relation between individual prosperity and the problem of the distribution of wealth.
9. Why, for centuries, has China been called a static society?
10. Are there any advantages a static society enjoys over a progressive society? If so, name some.
11. Is the world to-day in a static or a dynamic condition? What are the dangers as well as the advantages of this condition?

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PART TWO

PROBLEMS OF CONSUMPTION

CHAPTER V

THE CONSUMPTION OF WEALTH

- I. The economic life
 1. Its ideal
 2. How to measure this ideal :
 - a. Through the consumption of wealth :
 - (1) Its importance in childhood
 - (2) Its continuous character
 - b. Through the production of wealth :
 - (1) Why production is vital
 - (2) The economic life two-sided
- II. Nature of consumption
 1. Meaning of consumption
 2. Kinds of consumption :
 - a. Productive consumption :
 - (1) Meaning
 - (2) Examples
 - b. Unproductive consumption :
 - (1) Meaning
 - (2) Examples
 3. Effect on economic life
- III. Importance of consumption
 1. ~~How it varies~~
 2. Rules of consumption :
 - a. Consumption should be regular
 - b. Consumption should be varied :

- (1) Disadvantages of sameness
 - (2) Advantages of variety
- c. Conclusion

The Economic Life. — It must now be clearly evident that life has a distinctly economic background. Food, clothing, shelter, and recreation, upon which life so intimately depends, are the products of economic effort. All life is not economic; there is more than the economic in life; and yet all life is dependent upon the economic for its continuance.

When, therefore, we speak of the economic life we mean that life which strives for the attainment of welfare through economic means. Welfare may be social or individual, and it is possible that the two may not always harmonize. We have seen that a country may give evidence of great national prosperity, but that this prosperity may not be sufficiently individualized. It is, however, just this very ideal of individual welfare that the economic life is intended to embody. True social welfare should be thought of as including the welfare of all members of society.

Its ideal.

There are, perhaps, two measures of this welfare. The first, a measure in terms of the consumption of wealth, conceives of welfare as resulting from the satisfaction of economic wants. The second, a measure in terms of the production of wealth, conceives of welfare as resulting from surplus wealth.

How measured:

The consumption of wealth is the using of economic goods to satisfy human wants. Each child is a consumer. For a period ranging from ten to twenty-five years, the children born into American homes are not producing economic goods at all. During this entire period of youth they are maintained through

Through consumption.

the surplus created by the other workers of the community. Every adult, while preparing to produce, has passed through this era of consumption. When this consumption stage is prolonged, when the child's preparation for life is very complete, when efficiency has been assured by a sufficient supply of economic goods during the formative period, individual welfare is conserved and social welfare promoted, because the long period of consuming without producing results in more efficient production in later life.

If youth has been wisely spent, the years of adult life should show a large surplus of production over consumption. This surplus, which the individual owes to the community for his early years of maintenance, is used to support the children who, in the next generation, devote many years to productive training and thus guarantee their own efficiency in manhood. For adults, also, the economic life is possible only so long as an adequate supply of consumption goods is provided. Consumption provides the basis for youth and development, but it is no less essential to efficiency in adult life and to comfort in old age.

Goods cannot, however, be consumed until they are produced. Men cannot eat without working. Children *Through production.* cannot be kept in school until they are eighteen, consuming constantly but never producing, unless some of the adult producers are creating more wealth than they themselves are consuming. The economic life on its productive side, therefore, presupposes that the producing members of the community are producing enough, in addition to the amount that they actually consume, to enable the immature members of the com-

munity, and those beyond the period of active work, to maintain themselves. Differently expressed, each producer must create a surplus over the amount which he consumes.

The economic life is much more than consumption. It is consumption plus production. While human wants are satisfied directly through consumption, it is through production that consumption is made possible. There is in this concept of the economic life no place for idlers. Every normal adult man or woman must be a producer as well as a consumer, because the individual who accepts a return where no service has been rendered fails in his duty to society. Each member of an economic society must, therefore, render the community such service as he can render, receiving in return from birth to death at least enough consumption goods to maintain life and efficiency. In this way the ideal of the economic life will be approached.

Nature of Consumption. — The consumption of wealth is a far better measure of welfare than the production of wealth, because the amount of consumption can be more effectively determined in the individual case. The student, therefore, must clearly grasp the meaning of consumption. In economics, the consumption of wealth means the using of economic goods to satisfy human wants. This using up process may extend over a short or over a long period of time. Food is consumed at once; clothing is worn out gradually; while houses are used up over long periods of time. In other words, some goods satisfy wants immediately and directly, while other goods serve their purposes gradually and indirectly.

**Meaning of
consump-
tion.**

Consumption not only varies according to its duration, but it also varies according to the character of the wants that it satisfies. That is, consumption may satisfy desirable wants, or it may satisfy undesirable wants. Hence, consumption is spoken of as being productive or unproductive. The distinction between the two is not hard to grasp, for it rests upon the simple distinction between that which is beneficial and that which is harmful to production. From the standpoint of welfare, this difference is easily discernible.

**Kinds of
consump-
tion:**

Productive consumption is that consumption of goods which is beneficial to the individual and to society. When such consumption takes place, the consumer becomes a better producer either immediately or eventually. If the wants that are satisfied are those which contribute toward greater productive power in the individual, the consumption is productive. Such consumption makes the consumer a more efficient producer. For example, a good diet, proper clothing, adequate housing, necessary recreation and amusement are all forms of productive consumption.

*Productive
consump-
tion.*

Unproductive consumption produces the opposite effect on the individual. It either does not add to the productive capacity of the consumer, or it actually decreases his productive efficiency. It therefore decreases production negatively or positively. The wants that are satisfied by such consumption are unnecessary or harmful to the consumer's power of increased production. Their satisfaction results in extravagance or in actual harm. For example, the wearing of jewelry and ostentatious clothing is mere extravagance, which does not add at all to the power of production. On the

*Unproduc-
tive con-
sumption.*

other hand, over-eating and excessive smoking are forms of unproductive consumption which actually decrease the consumer's efficiency and productive capacity.

This contrast between productive and unproductive consumption shows clearly the relation between consumption and welfare. The economic life cannot be attained by those whose consumption follows unproductive channels. Only through productive consumption can individual welfare be attained. In this connection it is well to remember that the whole prohibition movement aims at the removal of one great source of unproductive consumption. The consumption of alcoholic liquors was the greatest single deterrent to productive efficiency in American life.

Effect on
economic
life.

Importance of Consumption. — Wants are thus satisfied through the consumption of economic goods. The importance of consumption, therefore, will depend upon the number, character, and variety of wants. In primitive times, when wants were few and simple, the consumption of the uncivilized man was limited to his elementary wants for food, shelter, and clothing. With the progress of civilization, wants are constantly increasing; and the problems of consumption, therefore, become correspondingly complex. The increase in number and variety of wants, which has accompanied advancing civilization, results in greater and more varied consumption, provided a system has been established which simultaneously increases production. The rules of consumption should therefore play an important part in American economic life.

How it
varies.

Society is slowly learning that to receive the highest benefit from the consumption of wealth, the individual

must consume regularly. Primitive man, depending on hunting and fishing for his livelihood, starved one day and gorged the next. Modern man, depending on a well-organized system of industry, is fed and clothed from day to day, and does not spend one day in misery and the next in happiness. In this way, by maintaining a constant rather than an intermittent supply of consumption goods, men are made more efficient producers.

Rules:
*Consump-
tion should
be regular.*

The first step in progress was to make certain a steady supply of consumption goods: the next step was to render that supply more varied. This idea of variety in consumption may be best seen by calling to mind again one point of difference between China and America. The Chinese have practically no variety in their consumption of food. Rice is their staple; and their dependence upon this single article of food has two distinct disadvantages. In the first place, workers get no particular pleasure out of this monotonous diet; and, in the second place, the nation starves if the rice crop fails.

*Consump-
tion should
be varied.*

America, on the other hand, is not dependent on one staple. The exclusive diet of rice, or wheat, has been replaced by a varied diet of fresh meat, eggs, butter, sugar, canned vegetables and fruits, bread and bread products, and fresh, salt, and canned fish. This variety in consumption has a double advantage. It means, first of all, that if one crop or one source of food-supply fails, the nation will not starve. It means, further, that this varied diet contains food elements which will give the individual more pleasure in his consumption and will therefore increase his welfare. Thus the American workman, whose food consumption includes meat, vegetables, fish, sugar,

bread, butter, and the like, lives a more enjoyable life and is a far more efficient producer than the Chinese laborer whose diet consists solely of rice.

With stability and variety in consumption comes the basis for economic welfare, provided this stability and variety exist throughout the various classes in the community. Hence, in order to determine the extent of welfare in the United States, it becomes important to inquire what standards of consumption are maintained generally throughout American society. *Conclusion.*

QUESTIONS FOR RECITATION

1. What is the economic life? Would you be an idler, if you could?
2. What two measures of welfare are there? Explain each.
3. Show the relative importance in early and later life:
 - a. Of consumption.
 - b. Of production.
4. Explain how the economic life is two-sided.
5. Define consumption.
6. Show clearly the difference between productive and unproductive consumption.
7. Give five examples of each.
8. Are our wants wholly under the control of our reason? Do we always desire those things which are beneficial? Can you give illustrations from your own life?
9. Explain the effect of prohibition on the economic life.
10. Explain what you mean by regularity in consumption. Give examples from primitive and modern man. Of what advantage is it?
11. What are the chief advantages secured by varying your consumption? Give examples.

PROBLEMS FOR DISCUSSION

1. Discuss the chief obstacles which hinder the American people from living the economic life.
2. Judged by a standard they would admit to be morally sound,

do people actually expend their incomes so as to receive maximum benefits? Give illustrations.

3. How varied is your own diet? Test by keeping a schedule for a day.

4. What advantages have nations whose consumption is varied over nations whose consumption is unvaried? Give examples from the world of to-day.

5. Discuss the effects of varied consumption on production.

6. Show the benefits that have resulted from the consumption of the following goods:

a. Tropical fruits and vegetables.

b. Breakfast foods.

c. Sugar.

7. Suppose you had a hundred dollars to spend, would you spend all of it at once? What would you buy? Would you buy the same things at all times and under all circumstances?

8. Are you able to satisfy all your wants? Which wants are most intense? Why?

9. Contrast the life of the country dweller with that of the city dweller.

10. Does "the economic life" mean a parsimonious or a narrow life? Why not?

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CHAPTER VI

THE PROBLEM OF THE STANDARD OF LIVING

- I. The standard of living
 1. What it means
 2. What it depends upon :
 - a. The wants of individuals :
 - (1) Meaning and kinds
 - (2) Meaning of utilities
 - (3) Law of diminishing utility
 - b. The cost of living
 - c. The income of workers
- II. Elements in a standard of living
 1. What the elements are :
 - a. The chief items
 - b. The minor expenditures
 2. How the cost varies :
 - a. In city and country :
 - (1) Rent
 - (2) Food
 - (3) Clothing
 - (4) Fuel
 - (5) Incidentals
 - b. In different cities
 - c. The conclusion

The Standard of Living. — The actual test of individual welfare is found in the standard of living enjoyed by all the members of the community. The standard of living simply means the amount of economic goods which an individual consumes. If he consumes

merely an amount sufficient to satisfy the bare necessities of life in regard to food, shelter, and clothing, an individual is said to have a low standard of living. If, in addition to these necessities of life, man is able to enjoy its comforts and luxuries through the consumption of various other economic goods, he is said to have a high standard of living. The standard of living varies, therefore, with the amount of economic goods consumed.

The consumption of these goods, which measures the standard of living enjoyed, depends upon three factors.

What it depends upon: In the first place, an individual would not consume goods unless there existed in him the desire for these goods. A man of very limited wants could never attain a high standard of living. In the second place, assuming that the goods are already produced, he could not consume them unless his income or wage was sufficient to satisfy these wants. Finally, the actual amount of goods he can purchase on a given income will depend upon the prices of the commodities he desires, that is, upon the cost of living. Hence, wants, income, and prices must all be considered in determining an individual's standard of living.

Wants vary with the individual; so that the supply of economic goods which would suffice in the case of one individual, or family, would not suffice in the case of another. If a man is fond of good pictures, his wants are extremely expensive; if he likes books, they are only less so; but, if he is satisfied with magazines and newspapers, they are cheaply supplied. Likewise, food varies from individual to individual and from family to family; as does also the desire for clothing and housing. A standard of living, therefore, depends sub-

The wants of individuals.

jectively upon the number and character of wants, which become more and more complex as civilization advances.

Wants necessarily play a large part in shaping American economic life. A want is a desire for a "good"; a good is an object or commodity which can be used in consumption. A want may be either elementary or acquired. Elementary wants are natural; and man, in a greater or less degree, shares these wants in common with animals. Acquired wants are part of our social heritage; that is, they have come down to us as a result of the process of civilization. Among them are included the wants for bathtubs, furniture, paved streets, and automobiles. The natural wants are desires for the necessities of life; the acquired wants are desires for its comforts and luxuries.

All economic wants, whether elementary or acquired, are satisfied by goods. Each good has the capacity to satisfy a particular want. Food satisfies hunger; drink quenches thirst; coal provides warmth; shelter furnishes protection. These qualities in economic goods which satisfy human wants are called utilities. Utility must not be confounded with usefulness; for it is perfectly possible for a commodity to possess utility without being useful. A diamond pin may not be useful, but it may satisfy one's desire for show. In economics, the word utility signifies the presence of some want-satisfying quality.

After utilities have been created or augmented in a good, this good does not possess the same want-satisfying quality under all conditions. As the want becomes gradually satisfied, its intensity diminishes and the utility of the good consumed decreases. This variation in utility gives rise to the formulation of the law of diminishing utility, which states that additional units of a good mean a decreasing

utility in each unit consumed. Suppose, for example, that you have been taking a long tramp and are strolling along a hot country road. You are tired and thirsty, and long for some luscious fruit to refresh you. The thought of an apple comes into your mind and you feel an intense want. If you could get just one apple, it would possess very great utility for you. As you trudge along you find, quite unexpectedly, that your longing is about to be satisfied. A farmer hails you, and, being loaded down with apples, offers you one. You thank him and eat the apple with extreme satisfaction. He offers you another, and still another, and by this time your want has been almost satisfied. You have enjoyed each apple, but in a less and less degree, because every additional apple affords less satisfaction than the preceding one. Finally, after you have eaten five or six apples, you have no desire for any more, — so far as you are concerned they cease to possess utility. In fact, if you were to persist in consuming apples, pain and distress would ultimately result; that is, to you, apples which a few moments before possessed utility would now possess actual disutility. This fact of diminishing utility is important because it affects the determination of the price you are willing to pay for the commodity you desire.

The price of commodities, or the cost of living, is another important factor upon which a standard of living depends.

The cost of living. When prices are high, a given income will evidently purchase less than when prices are low. In fact, when prices are very high a man receiving comparatively good wages may not be able to purchase as many goods as a man with a smaller wage can buy at a time when prices are low. For example, the man with a \$2000 income, who pays eighty cents a pound for butter,

is not so well off as the man with a \$1500 income who buys the same butter for forty cents a pound. The purchasing power of income is therefore a very important factor in determining the standard of living.

Finally, income itself is of vital importance in determining the amount of economic goods that an individual may consume. When wages are extremely low and prices are normal, it is impossible to maintain *The income of workers.* a high standard of living. So obvious is this, that low wages in this country are almost synonymous with low standards. Labor organizations, therefore, fight with all the might of their great power to keep wages at a high level, in order that the workers may be able to maintain a standard of living high enough to include not only the necessities of life, but also the goods that are needed to satisfy the higher wants that men have developed.

Elements in a Standard of Living. — A standard of living to accomplish its purpose of securing individual welfare and maintaining efficiency should provide for: (1) the necessities of life, including housing, food, clothing, fuel, light, and transportation; **What the elements are:** (2) recreation facilities, including proper provision for health and hygiene, amusements, and books; (3) voluntary subscriptions for insurance, clubs, trade unions, and regular savings; and (4) unusual expenditures for medicines and physicians, as well as funds required for household furniture and incidentals.

Almost all the expenditures of a workingman's family are made for the necessities of life, of which housing and food are by far the most important in a modern *The chief items.* city. The investigations that have been made into this subject have been based upon the normal family

of five persons, including the father, mother, and three children under fourteen years of age. The families and wages considered are those of workingmen. It has been found that such a family spends from eighteen to twenty-five per cent of its income for rent, the percentage varying according to the income received. It has also been shown that the largest single factor in the family budget is food, the expenditure for which amounts to from forty to forty-five per cent of the income of workingmen's families.

Clothing was found to constitute a relatively small item in the budget of a city workingman's family, the amount spent for such purpose averaging only about thirteen per cent of the income. The expenditures for fuel and light are comparatively small, varying from four to six per cent of the family income; while the amount spent for transportation in large cities averages about two and one-half per cent of the income. Expenditures for recreation vary considerably. In the lower income groups they are very small, but they rise rapidly with the increase of income. The same thing is true of the voluntary disbursements and the unusual expenditures.

In this discussion of the elements in a standard of living and of their relative importance in the family budget, it is important to remember that only city conditions and workingmen's families have been here investigated. To estimate the relative expenditures for these different items for a family living in the country, it is necessary to take into consideration the difference between city and country conditions and the consequent difference in the cost of living in city and country. A particular element in the standard of living,

*The minor
expendi-
tures.*

*How the
cost varies:
In city and
country.*

such as clothing, may not possess the same importance to the country family as to the city dweller. Furthermore, the cost of living as a whole may be considerably lower in the country than in the city; so that, on a given income, a higher plane of living may be attained by living in the country rather than in the city.

Take, for example, the question of rent. For a given sum, which in the tenement district of a great city would suffice only for one or two rooms, a family may secure in the country a fairly comfortable four- or five-room wooden house. Thus, in regard to housing, a higher plane of living, on a sum allotted to rent, may be maintained in the country than in the city.

Again, the price of food, the most important item in maintaining a proper standard of living, varies in city and country. Although the price of meat is about the same in both places, vegetables are usually lower in the country, the price paid for them being the equivalent of the city price with the cost of freight, the charge of the commission merchant, and the profits of the retailer deducted. However, the prices of canned goods, bread, cakes, and crackers differ little in city and country districts. Things which are produced in the country are much lower in price there than in the city; while things which are produced in factories are about the same price in city and country.

In the country the item of clothing is not so important as in the city. Perhaps the cost of clothing would not vary so greatly in city and country districts were it not for the presence in the city of rich people who dress extravagantly. The standard of dress which they set becomes the conventional or fashionable standard, and it must be

followed by all who would be "in style." The result is an expenditure in the city for trumpery and cheap finery which is unknown in the country.

Another important item in the city is the expenditure for fuel; but in the country fuel is almost a negligible quantity because wood, which is very generally burned, can be easily and inexpensively secured. Hence, the fuel supply is much more cheaply provided in country districts and small towns than in larger cities where coal is so expensive.

Finally, the country districts do not furnish so many opportunities for spending money as do the city districts. There is little carfare to pay, and the temptation to buy in stores is greatly lessened by the absence of display advertising in shop windows. Therefore, less will be spent in the country for incidentals.

Again, the cost of living varies in cities themselves, and individual items of expense are much greater in some cities than in others. For example, a great metropolitan city, like New York, may require a much higher expenditure for housing than is made necessary by living in a smaller city. While one item may offset another, these differences must be taken into account when estimating the cost of living in different cities, and the standards of living attainable in them on a given income. Furthermore, it is well to remember that many of the investigations concerning standards of living have been conducted in great metropolitan cities, and that, therefore, it may be necessary to revise our conclusions when the results of such investigations are applied to smaller cities.

From this discussion of the standard of living it will be seen just how difficult it is to come to definite conclusions

regarding it. In forming our judgments we must take into account (1) the wants of individuals, which themselves must be differentiated; (2) the cost of living, which itself is found to vary in different localities, and (3) the income of workers, which is required to purchase the goods needed for consumption. In order to arrive, therefore, at a more definite conclusion regarding the actual standards of living enjoyed by American workers, it is now our purpose to inquire into the wage received, and the wage required, to maintain such a standard of living as will insure individual welfare and guarantee industrial efficiency.

QUESTIONS FOR RECITATION

1. Define "standard of living."
2. What are the effects of maintaining a reasonably high standard of living?
3. What are the three determinants of a standard of living?
4. Explain the meaning and kinds of wants.
5. Show the relation between wants and utilities.
6. Explain the law of diminishing utility.
7. Enumerate the four elements in a standard of living.
8. Show the relative proportions of income spent for food, shelter, and clothing among workingmen's families in industrial centers.
9. What are the minor expenditures? How are they relatively distributed?
10. Compare the cost of living in city and country in regard to:
 - a. Rent.
 - b. Food.
 - c. Clothing.
 - d. Fuel.
 - e. Incidentals.
11. Why does the cost of living vary in cities?

PROBLEMS FOR DISCUSSION

1. Discuss the effects of differences in cost of living upon standards of living.
2. In your opinion, what are the most fundamental reasons for maintaining a proper standard of living in a community?
3. Do economic wants increase more quickly than the standard of living? Give examples.
4. What would be the effect upon standards of the poorest third of our city populations moving on to farms? Discuss and illustrate.
5. Is it possible in the United States to provide a uniform minimum standard of living for all? State your reasons.
6. Discuss the ultimate effect on the individual of living below the normal standard.
7. Why should the community at large be interested in maintaining a reasonably high standard of living?
8. What are the forces most to be relied upon to maintain a proper standard of living?
9. Analyze the standards of living maintained in your own community. If they vary, explain the reasons.
10. Of the three factors determining the standard of living, which do you regard as the most important? Why?
11. What is meant by a normal, reasonable, or proper standard of living?

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CHAPTER VII

THE PROBLEM OF INCOME •

I. Wages of workingmen :

1. The problem stated
2. Pre-war times :
 - a. The wage paid
 - b. The wage required
3. Post-war times :
 - a. The wage paid
 - b. The wage required :
 - (1) The reason
 - (2) The amounts
 - c. The conclusion

II. Wages and prices

1. The relationship
2. Money wages and real wages
3. How prices affect wages
4. Recent fluctuations
5. When prices rise :
 - a. The sufferers
 - b. The causes :
 - (1) Increased supply of money
 - (2) Decreased production
 - (3) Relation of supply and demand
 - (4) Defects in government
6. When prices fall
7. The conclusion

Wages of Workingmen. — In order to maintain the standard of living necessary for health and efficiency, the

worker must receive wages sufficiently high to purchase the goods required for consumption. The problem now before us is to find out what actual wages are paid workingmen; whether they are sufficient to meet the requirements of a proper standard of living; and, if not, to inquire what wages should really be paid them. To answer these questions it will be necessary to indicate the general level of wages throughout the community, to show the effect of prices on wages, and to realize at the outset that the statistics dealing with incomes are constantly changing, and that, therefore, no conclusions as to relative poverty and prosperity can be valid for long periods of time.

A number of important investigations have been made by individuals and Government Bureaus into the wages of laborers and the incomes of American families. The United States Bureau of Labor issues frequent Bulletins embodying the results of its investigations into this field. Reports issued at the close of the first decade of the twentieth century revealed some interesting conditions that existed at that time among workers in industrial sections in the northeastern part of the United States. This survey reflected normal conditions that prevailed before the world was plunged into the war that dislocated its entire economic system. The results of these investigations, therefore, may be taken as representative of typical conditions existing in certain industrial sections of America before the World War. The statistics compiled showed that, at that time, half of the adult males working in these sections of the United States received less than \$600 per year; that three-quarters received less than \$750 annually; and that nine-

tenths earned less than \$1000 per year. These figures were approximate estimates and were not strictly accurate because they did not make allowance for unemployment.

At the same time that these statistics were being compiled, other investigations were being made into the actual income required to maintain a reasonable standard of living among industrial workers. *The wage required.* A study of the families of workingmen living in Buffalo, New York, and Pittsburgh showed that a normal family of five could maintain a proper standard of living only on an annual income ranging from \$750 to \$1000, according to the locality. This amount was required to provide the necessities of life for the parents, and to furnish the children with nourishing food, warm clothing, decent housing, elementary education, and a legitimate amount of recreation. It was therefore evident that a great discrepancy existed between the wage paid and the wage required to maintain efficiency. For, at that time, according to these statistics, three-fourths of the industrial workers in certain sections were receiving less than the minimum, and nine-tenths less than the maximum income required to maintain a proper standard of living.

With the World War, and thereafter, came great changes both in the wage paid workers and in the income required to maintain a normal standard of living. It is *Post-war times: The wage paid.* safe to say that, as a result of the changes wrought by this world cataclysm, the wages of many workers doubled and even trebled during this period; so that those formerly receiving annual wages of \$750 or \$1000 then received \$1500 or \$2500. Particularly was this true of the skilled and semi-skilled laborers, although many unskilled workers profited by the general

increase. In the skilled trades it sometimes happened that wages were not only doubled, but even trebled. The income of men receiving fixed salaries, however, did not rise correspondingly. The rise in wages during the war was attested by the income tax returns of 1917, which showed that, in approximately seventeen per cent of the 20,000,000 American families, some one individual reported an income of more than \$1000. If we take into account (1) the fact that these returns did not include family incomes totaling \$1000 made up of individual incomes of less than that amount, and (2) the fact that they did not include the rental value of the home owned, and (3) the fact that they did not include the incomes of those exempt from the payment of the tax, as well as those who actually evaded making income tax returns, it is not at all improbable that, instead of seventeen per cent, twenty-five or thirty per cent of American families at that time received incomes in excess of \$1000. Thus, as contrasted with the pre-war conditions, perhaps seven-tenths, not nine-tenths, of families in the United States earned less than \$1000 annually.

This general increase in wages following the World War was necessitated by the higher income required to maintain the standard of living essential to individual and social welfare. The standard of living itself had not necessarily advanced, but the income required to maintain the old standard had greatly risen. This fact was clearly shown by various investigations of the cost of living in different cities of the United States. For example, in Philadelphia, the Bureau of Municipal Research issued an exhaustive report in 1919 showing that the normal workingman's family, consisting of two adults

*The wage
required.*

and three growing children, required a minimum annual income of approximately \$1800 in order to maintain the standard of living enjoyed before the World War on an income of \$1000. This position was supported by the official index numbers of the Federal Bureau of Labor statistics, which gave the increase in the cost of living in the shipbuilding centers of the United States during the five years of the World War as eighty per cent. In other words, a man receiving an annual income of \$1000 in 1914 required an income of \$1800 in 1919 to maintain his pre-war standard. Statistics issued by the Federal Bureau of Labor in 1920 showed that the average increase in the cost of living had jumped from ninety-six per cent at the beginning of that year to one hundred and nineteen per cent toward the close of that year.

The Philadelphia report was based upon a detailed study of the home budgets of two hundred and sixty typical families living, for the most part, in the industrial districts of the city. The annual expenditures of the average family were allotted as follows: for food, \$674; for rent, \$300; for clothing, \$346; for fuel and light, \$84; for transportation, \$35; for miscellaneous expenditures, including those for cleaning supplies, health, furniture, dues, recreation, and amusement, \$361. The report did not regard these expenditures as fixed or as ideal, but considered them as fairly representative of the amount needed for workingmen to realize a reasonable standard of living in times of high prices and general transition. For other cities, these individual items and the sum total of income varied according to local conditions. In some cases the minimum set was considerably lower than \$1800; while in New York, in the garment industry, the workers placed the minimum in-

come required for a reasonable standard of living as high as \$2500.

This contrast between conditions prevailing in 1910 and in 1920, with regard to the wages paid and the income required to maintain individual and social welfare, makes it evident that no fixed figures can be given either for the wage paid, or the wage required, for the normal workingman's family. To predict what wages and standards will be in future decades, is the task of the prophet, not the economist. But, in attempting to forecast the future, it is well to bear in mind the prolonged abnormal situation following the Civil War, when it required more than a decade to restore the old equilibrium between wages and prices. However, the half century elapsing between these two great wars wrought vital national changes which make comparisons difficult. The Federal Reserve Act, for example, passed before the outbreak of the World War, diminished the possibility of panics in times of crises by means of its system of regional banks, which displaces the old centralized control of finances. War's aftermath, however, is usually the same; underproduction, overconsumption, speculation, inflation, debt, and depression. In the end, the bubble of exorbitant prices bursts and production once more becomes normal. When the supply of goods is adjusted to the demand, prices decline and wages fall. If this transitional period is a gradual one, the necessary adjustments may be made without panics and industrial crises. If men do not work and save, however, no critical economic period can be successfully passed.

Wages and Prices. — This discussion of wages brings out the intimate relation that exists between wages and

prices. A study of wages of itself would tell little of the condition of the worker. A study of prices alone would be equally ineffective. The two together constitute complementary sides of the same question. Wages are not an end in themselves; they are merely a means to the consumption of goods. The really important point is not how many dollars a man receives, but how many goods he can buy with these dollars; and this in turn is determined by the prices of the goods.

In this manner, the purchasing power of wages is the real determinant of a standard of living. Hence it is highly important to bear in mind the distinction between money wages and real wages. Money wages are wages actually paid in dollars and cents; while real wages represent the purchasing power of that money. The problem of income, therefore, centers about real wages, for it is that which determines the worker's standard of living. Not money wages, but the goods which the money will buy, is the factor of vital importance in our study of workingmen's incomes.

In that study the effect of prices on wages has already been indicated. This effect was made evident to all by the course of the World War. But before that event, it had been frequently overlooked; especially by the immigrant to this country, who was attracted by the lure of what appeared to be high wages. As compared with what the immigrant received in his native country, the wage he received here was two or three times as great. This difference in wages strongly appealed to him; but when once here he found that prices had advanced in an equal, if not a greater, proportion. Thus it was quite possible for his real wages to be less in

The relationship.

Money wages and real wages.

How prices affect wages.

his new home than in his old. To offset this, he frequently maintained an exceedingly low standard of living. On the other hand, when, after the World War, prices advanced and production declined abroad in a greater ratio than wages advanced, the immigrant again cast longing eyes to America where the rise in prices and wages had been more proportional.

Fluctuations usually occur in both wages and prices. The United States Labor Bureau frequently publishes bulletins contrasting the wages of labor with the cost of living. A study of these bulletins shows that since 1890 there has been a very great change in both wages and prices. Both fell heavily during the financial depression of 1893-94, and then both rose regularly until 1907, when there was another sharp decline. This was followed by a slight rise in both until 1914, when there began the tremendous rise which continued throughout the World War, when a downward reaction again set in.

The question of whether, in these fluctuations, prices have risen more than wages, or wages more than prices, is a vital one. It may not be possible to determine this point with mathematical accuracy for all occupations and for all classes of people. But one fact seems apparent, — prices rise for all who consume the goods in question, but wages rise proportionately for only a part of the workers who consume these goods. Hence there is little doubt that, in these fluctuations, the real wages of many individuals do not advance, but that in many cases they actually decline. This situation becomes particularly acute among those who receive crystallized wages, or salaries, ranging from less than \$1000

Recent
fluctua-
tions.

When prices
rise: *The*
sufferers.

to \$3000 annually. The studies of wages and the cost of living include the wages of wage-earners only. Were like investigations made for the large class of salaried employees, it would probably be found that while, in times of great economic changes, prices rise as much as one hundred per cent, salaries may rise only thirty or forty per cent.

What are the causes of rises in prices? Many attempts have been made to answer this question, and it is possible here only to indicate briefly the main factors to be considered in a discussion of this question. *Causes of rise in prices.* The World War, more than anything else, stimulated inquiry in this direction and brought to general attention the paramount significance of certain fundamental economic principles at work in American life. These may be summarized under the effects of (1) the increased supply of money, (2) the decreased amount of production, (3) the relation of supply and demand, and (4) the defects in government which permit individual gain at the expense of social welfare. In addition to these, there are many other contributing causes, the investigation of which is far beyond the scope of this inquiry.

Prices may be considered from two points of view: (1) from the value of money on the one side, and (2) from the value of goods on the other. Prices, therefore, may rise because gold, which represents money, has decreased in value; or because goods, other than gold, have increased in value. When money is more plentiful, a unit of it is worth less and, therefore, a greater number of units is required to make up a given value. During the period of the World War the amount of money in the United States was enormously increased. This increase was brought

about in two ways: (1) through the inflow of gold from abroad to pay for the huge quantities of food, munitions, and supplies exported to Europe; and (2) through the issue of bonds and Federal Reserve notes which had the effect of currency inflation. Through inflation, therefore, the value of money was decreased, and prices accordingly rose; that is, it required more dollars to purchase a given quantity of goods.

Prices may also rise because goods have increased in value. Just as there may be an over-supply of gold, so there may be a shortage of goods; and, when both these circumstances occur at once, the effect is twofold. During the World War, vast quantities of goods were sent abroad, while few goods were being shipped to this country. This decreased the amount of goods left for home consumption. At the same time, two million workers were withdrawn from production for military purposes; so that there resulted not only a decreased production, but an increased cost of production due to the scarcity of labor. Thus it happened that the value of goods rose enormously. The war, draining us of goods and flooding us with money, caused goods to rise in terms of money. Only with increased production, or with scarcity of money, is an equilibrium restored.

Again, we may look at the problem from the standpoint of the relation between supply and demand. An increase in demand tends to raise price, while an increase in supply tends to lower price. Since the price of a good is determined by the demand for, and the supply of, that good, it is an easy matter to see the effect of this relationship upon prices during and right after the World War. Goods were in great demand, while their supply was limited; hence

prices were high. On the other hand, gold was not in such great demand, and its supply was relatively plentiful. Hence the price of gold, its value in terms of goods, was low.

Aside from these economic laws, other considerations may enter into the determination of prices. Under the conditions noted above, prices of goods are bound to rise or fall; but, because of inadequate governmental regulation, or because of individual shortcomings, it is quite possible in modern society for prices to rise beyond the limit required by economic laws. The mere statement of this fact will bring to mind the evils from which society suffers. So long as natural resources are monopolized by individuals for private gain, so long as men are allowed unrestrained to fix prices for their own enrichment, and so long as extravagance — not thrift — determines man's consumption, society cannot hope to attain that individual welfare in which normal prices play an important part.

Prices fall with the reversal of the conditions previously described. To bring about the fall of prices it is first necessary to increase production. Goods must **When** become more plentiful so that their value may **prices fall.** decline. While this process is taking place, deflation must also occur. That is, the value of money must become greater by limiting its supply. This may be accomplished by retiring paper currency, and by increasing import trade. When imports exceed exports, the amount of money in a country decreases through the shipment of gold abroad to pay for the unfavorable balance of trade. In this manner the quantity of money decreases, its value rises, and prices decline. Of course, this increased production of goods and

decreased supply of money must be accompanied by a decline in extravagant living and by a return to normal habits of work.

With this chapter we close the discussion of the problems connected with the consumption of wealth. Whatever may be the ultimate conclusion regarding the amount of wages required to meet the varying cost of living, the fact still remains that it is society's duty to see that a sufficient income be provided the worker to maintain a reasonable standard of living. Families — men, women, and children — require a certain minimum of the necessities of life. Such a minimum, whatever it may cost, should, in the interest of welfare and efficiency, be assured every member of the community. In the United States, our study of wages shows that individual prosperity, through the distribution of social income, is much nearer realization than in the older European civilizations.

QUESTIONS FOR RECITATION

1. Compare the wages of workingmen now with the wages paid them before the World War.
2. Compare present-day wages with the wage received after the World War.
3. Compare workingmen's wages just before and just after the World War.
4. What accounts for these fluctuations in wages?
5. Is the wage paid usually equal to the amount required to maintain a normal standard of living? Prove your position.
6. What constitutes a "normal family"? What amounts are required to-day to maintain them in health and efficiency? Do they receive the sum total required?
7. Explain the difference between money wages and real wages.
8. How do prices affect wages?

9. Why is the actual amount of the money wage unimportant?
10. Explain the causes of a rise in prices.
11. Who suffer the most when prices rise?
12. When do prices fall?
13. Who gain the most when prices fall?

PROBLEMS FOR DISCUSSION

1. Discuss the relative distribution of wealth throughout the United States.
2. Is it true that, as America becomes wealthier, the masses become poorer? Give reasons for your conclusion.
3. Discuss the relation that should be maintained between wages and standards.
4. When there is a discrepancy between wages and standards, what remedial steps should be taken?
5. Do high wages mean a high standard of living? Why not?
6. When do wage increases become necessary? When may wages be lowered without lowering the standard of living?
7. Show what wages should be to-day and what they actually are.
8. Make up some typical family budgets.
9. Compare the fluctuations in wages and prices that occurred after the Civil War with those that occurred after the World War.
10. How may an adjustment be effected between wages and prices?
11. Discuss Engel's laws of expenditure.
12. Do you believe in minimum wage laws? To what extent may they be employed? What evils may result from them?

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PART THREE

PROBLEMS OF PRODUCTION

CHAPTER VIII

THE PRODUCTION OF WEALTH

- I. Nature of production
 1. Meaning of production
 2. Kinds of utilities :
 - a. Natural utilities
 - b. Form utilities
 - c. Place utilities
 - d. Time utilities
 - e. Possession utilities
 3. Factors of production :
 - a. What they are
 - b. Their relative importance
- II. Part played by natural resources
 1. In ancient times
 2. In modern times
 3. In India and China
 4. In the United States
 5. The conclusion

Welfare may be measured not only in terms of consumption, but also in terms of wealth production. In fact, the whole process of consumption is conditioned upon that of production. It is, therefore, our purpose now to inquire into the nature of production, to analyze

the basic factors of production, and to study the development of the productive process in the United States, in order to ascertain how far the production of wealth has administered to the welfare of the American people.

The Nature of Production. — Production is the process of creating or of increasing utilities in goods, that is, of **Meaning of** creating want-satisfying qualities in the raw **production.** materials of nature which supply the basis of all economic goods. According to the theory of the indestructibility of matter, man can neither create nor destroy a single unit of matter. However, it is perfectly possible for him to change the form of this matter, or to otherwise alter its condition, so that it will satisfy some definite want. This process, taking place everywhere and at all times, results in the creation of utilities in economic goods. Man's efforts in the field of production consist, therefore, of all his activities which lead to the creation of utilities of one kind or another.

In economics, the word *utility* signifies, as we have seen, the presence of some want-satisfying quality. There **Kinds of** will, therefore, be as many kinds of utilities as **utilities:** there are ways in which goods may satisfy human wants. Goods may satisfy wants either because of their nature, or form, or place, or time, or possession. Hence there are five kinds of utilities: (1) natural utilities, (2) form utilities, (3) place utilities, (4) time utilities, and (5) possession utilities.

Natural utilities are those existing in goods because of their inherent nature. Coal, for example, though embedded **Natural** in the vein, possesses utility. To be sure, this **utilities.** utility cannot be made available without an intermediate process called mining; but the coal, like

many other gifts of nature, possesses in itself the power to satisfy human wants.

Form utilities are those created by a change in the form or in the inherent qualities of goods. For example, a chair in the furniture factory possesses a greater want-satisfying capacity than the boards in the lumber yard, or the trees in the forest. The clay in the clay pit will not satisfy nearly so many wants as the clay pressed into bricks, baked and ready for building operations. Form utilities are the creations of manufacturing processes, and we therefore usually think of manufactured goods when we speak of this kind of utility.

Place utilities are those created by changes in the location of goods, whereby such goods are taken from a place where they are not especially needed to a place where they are in great demand. Occasionally, cotton in certain parts of the South and corn in certain parts of the West are of such low utility that they are sometimes burned for fuel; but the transportation of either commodity to Massachusetts greatly enhances its want-satisfying quality. The utilities in the goods have been increased by transportation, because cotton or corn will satisfy more wants in Boston than in Texas or Kansas. Transportation has created place utility in these goods.

Time utilities are those created by holding economic goods from the time when they are not wanted till the time when they are wanted. Ice, in January, is seldom wanted and possesses little utility, but the same ice stored until July is very much in demand, and therefore possesses great utility. This increase in utility due to the lapse of time is called time utility.

Possession utilities are those created through changes in ownership. By an act of exchange, a good may pass from the hands of one who does not greatly desire it, to another who feels the need of it intensely. To its new owner it acquires additional utility. This kind of utility is especially perceptible in acts of barter, whereby exchanges are made that directly benefit both parties. The added utility that comes through change in ownership is thus called possession utility. In modern life, real estate brokers, for example, are engaged in giving goods this kind of utility.

In various ways, therefore, man is engaged in acts of production; that is, in increasing or creating utilities in goods in order that human wants may be satisfied.

Production, which furnishes the material basis of welfare, depends upon natural resources, labor, and capital.

Natural resources are gifts of nature, limited in extent; labor is industrial effort; capital is an economic good used to assist in production.

Every modern productive operation requires these three factors. Land furnishes the raw material; labor, the effort; and capital, the tools which are to assist in the act of production. Thus, specifically, the tree standing on the hillside is a natural resource. A man approaches the tree and begins chopping it with an ax. The man is labor; the ax is capital. The felling of the tree, which has brought it one step toward its final form of chairs, let us say, is one act in an operation which will enable the wood to satisfy human wants. Therefore, the entire operation is an act of production.

No modern productive act takes place without these three factors. To-day, the production of material wealth,

in whatever form imaginable, has become so highly organized that it is impossible without the participation of land, labor, and capital. The necessity for the participation of all three factors, however, did not originally exist, because nature and man — land and labor — were the primary forces at work in civilization. Nor would this necessity exist to-day, if we could reproduce primitive conditions. A modern Robinson Crusoe, with only natural resources and his own labor to rely upon, would be obliged to create his own capital. Capital is thus the offspring of land and labor. It is the secondary factor in production, while land and labor are the primary requisites of production. However, this distinction, to-day, is of comparatively little importance, because capital is just as essential to modern production as either land or labor. In order to realize to what extent a nation may attain economic greatness, it will be necessary to examine carefully the part played by each of these factors in production. First we shall examine the part played by natural resources.

*Their
relative
importance.*

The Part Played by Natural Resources. — Natural resources may not make a civilization, but without them civilization would be impossible. A study of the great civilizations of the past shows that, without exception, the basis of their greatness was an adequate supply of natural resources. Babylonian, Egyptian, Carthaginian, and Roman civilizations were all established in fertile valleys, or with a nucleus of fertile land. In an age when agricultural land was almost the only resource available, civilizations were necessarily founded in fertile agricultural districts. This truth was in the mind of the preacher who publicly gave thanks to Heaven for making

*In ancient
times.*

great rivers flow beside the big cities. Although his economics was defective, he was grasping at an important geographical principle.

Natural resources are more important to-day than they were in any historic period, because modern civilization **In modern times.** is founded on mineral as well as on agricultural resources. What, then, are the present resources of the world? Where do we find the physical possibilities for the development of great modern civilizations? The retarded development of the African continent is the outcome of its vast desert, great heat, regular coast line, and few navigable rivers. South America has its Amazon basin, but the tropical location and dense vegetable growth prevent that region at present from realizing its full possibilities; while the southern portions of the continent are too restricted in extent to furnish the basis for an extensive civilization. In Europe, where the fertile basin of the Danube provides a really adequate physical background for this purpose, racial and political handicaps stand in the way of economic development. In a similar manner, Australia, while great in extent and situation, is retarded by a regular coast line and the restrictions of vast stretches of barren territory.

There remain three other regions abounding in natural resources, and furnishing a physical basis for marvelous **In India and China.** economic development. Two of these are in Asia, and each is the seat of ancient power and empire. Both India and China enjoy physical resources equal to those of any world power, although the semi-tropical climate of the former partly militates against its success as the home of a dominant civilization. These regions, however, are, as we have seen, hide-bound by tradi-

tions which stand in the way of utilizing the vast resources at the command of the native peoples. Thus, labor is inefficient and capital is inadequate to develop the natural resources which form the basis of national greatness and prosperity.

The remaining and greatest of these areas for world power and civilization is the United States. Here abound those natural resources which are at the foundation of production, and upon which all civilizations rest. In the
United
States. Here also is an abundant supply of capital, amassed by the breaking of tradition, and an efficient labor force, independent and self-respecting. The United States, with its Mississippi Valley, its variety of climate, its agricultural and mineral resources, its great rivers, and its broken coast line, has spelled opportunity to millions of civilization-makers, and promises in the future even greater economic and spiritual development.

So vital is the part played by natural resources in the production of wealth that industrial supremacy is dependent upon their utilization. To attain economic greatness a nation must command the use The
conclusion. of such resources, if it does not actually possess them. Thus England not only relies upon the advantages of natural position and the rich mineral deposits of her own land, but draws as well upon the vast stores of natural wealth supplied by the British Empire. France depends not only upon her rich agricultural resources, but looks for the full restoration of her coal and iron deposits. Germany, in her insatiable desire to secure dominant control of land and minerals, warred upon civilized mankind. Thus the world witnessed the titanic struggle for economic supremacy based upon the control of natural resources.

On the other hand, the failure to develop the resources of the land, when they exist freely in nature, accounts for industrial backwardness and national retardation. China's failure in this respect has already been noted. In Europe, the neglect of Russia to develop adequately the vast resources of the land accounts for her failure thus far to attain that commanding economic position which her natural wealth justifies. With efficient labor, with increased capital, and with a highly organized productive system, the twentieth century holds out untold possibilities for those civilizations possessing adequate natural resources.

QUESTIONS FOR RECITATION

1. When may production be a measure of welfare? When is it not?
2. Define production. What is the test of a productive act?
3. Define utility. How do utilities and wants differ?
4. Name and define the five kinds of utilities.
5. Give an example of each kind of utility.
6. Tell, with your reason, (1) whether each of the following possesses utility, and (2) whether each is material wealth:
 - a. Water.
 - b. Diamonds.
 - c. Sunlight.
 - d. Candy.
 - e. Air.
 - f. Tobacco.
7. When do goods reach the margin of utility? What effect has the point of satiety upon consumption; upon production?
8. Name and define the factors of production.
9. Explain the relative importance of the factors of production.
10. Can there be any modern productive act without the participation of all three of these factors? Prove your answer.

11. Explain the natural advantages enjoyed by the United States in regard to the possibilities of wealth production. Contrast her position with that of Germany.

12. Explain the difference between natural resources and economic goods or wealth.

13. Do natural resources possess utility? What kind?

PROBLEMS FOR DISCUSSION

1. Compare the relative parts played by consumption and production in your own life. Give various illustrations.

2. What connection has the theory of the indestructibility of matter with the principle of production? Do these two principles conflict?

3. Show whether utility is synonymous with usefulness. Prove your position by giving examples.

4. Show the relation between the law of diminishing utility and the theory of price.

5. Discuss the importance of production to civilization.

6. Show the part played by each factor of production in the making of: *a.* Hats. *b.* Locomotives. *c.* Bread. *d.* Shoes. *e.* Books.

7. How were ancient civilizations dependent upon natural resources? Give examples from history.

8. Why are modern civilizations still more dependent upon natural resources? Prove your point.

9. Are natural resources sufficient to guarantee economic greatness? What evidence is there for your statement? Give illustrations.

10. Contrast the factors of production with the characteristics of material wealth. Give examples of your meaning.

11. Discuss the difference between natural wealth and material wealth.

12. Account, on the basis of natural resources, for the present economic position of the more important European civilizations.

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CHAPTER IX

NATURAL RESOURCES OF THE UNITED STATES

- I. Importance of land
 1. What "land" means
 2. How it determines activities
 3. How it aids man
- II. How nature favors the United States
 1. In soil and climate
 2. Importance of soil :
 - a. Law of diminishing returns :
 - (1) The law stated
 - (2) An example
 - (3) Effects of this law
 - b. America's advantage
- III. Minerals of the United States
 1. Their importance
 2. Kinds of minerals :
 - a. Coal :
 - (1) Supply and consumption
 - (2) Kinds and uses
 - b. Petroleum and gas :
 - (1) Supply and consumption
 - (2) A future problem
 - c. Iron and copper
 - d. Other minerals
 - e. The outlook
 3. The conclusion

Importance of Land. — In economics, the word "land" is used synonymously with natural resources. It is taken

as typical of all natural resources because it is so representative of nature. Land includes not only the materials of nature, such as forests and minerals, but also the forces of nature, such as the power of waterfalls and the fertility of the soil. Again, land includes not only fields and meadows, but also rivers, lakes, bays, fish, forest, wild game, mines, and wells. In short, land includes all the gifts of nature, limited in extent, which exist in their present form without the expenditure of human labor. Most of this natural wealth is converted by productive operations into raw materials of industry.

The character of natural resources determines the lines along which people direct their energies. Could Columbus, for example, when he first reached American shores, have seen the vast continent with all its latent possibilities, he might have predicted many of the transformations which have since taken place. Along the barren New England coast with its sharp, forested hills, thin soil, rivers, creeks, and bays, he would have observed the possibility of developing lumbering, ship-building, fisheries, commerce, and manufactures. In Pennsylvania, he would have seen that the pioneer would eventually employ coal, iron, and oil, and from these construct the new industry. Again, could he have traveled over the fertile valleys of the South with its congenial climate, he would readily have foretold that here was a basis for extended agricultural development.

Natural resources assist in the development of civilization chiefly in four ways: (1) soil and climate furnish the basis for agricultural development; (2) mineral resources furnish the basis of industry; (3) forests provide wood and conserve rainfall; and (4)

What
"land"
means.

How it
determines
activities.

How it
aids man.

water resources furnish transportation and power. Each of these will now be discussed at some length in this and in succeeding chapters.

How Nature Favors the United States. — Nature has been free in her gifts to the United States, but perhaps nowhere more so than in the wide range of climatic and agricultural conditions which she has afforded. The fertility of the soil is remarkable. The land, stretching fifteen hundred miles north and south, makes possible a wide range of climate, further diversified by altitudes ranging from sea level to elevations of several thousand feet. The most southern part is parallel with the great Sahara, while the northern limits, exclusive of Alaska, are in the latitude of Germany. Most parts of this vast area, about the size of Europe, will support a variety of crops. Even where the amount of rainfall is inadequate, natural obstacles may often be overcome by irrigation. If varied climate is an aid to varied agriculture, there is no other section of the world in which a more effective combination of climatic and agricultural possibilities exists; for, it must be remembered, climate is a basic resource which cannot be destroyed or materially altered by human wastefulness. Modern world powers have their homes in the temperate zone; and it is fair to assume that, so long as the present forms of civilization prevail, cold, invigorating winters with warm, short summers will combine to produce the greatest vitality and the most enduring energy.

Soil itself is of such fundamental importance that we commonly refer to it as "mother earth." All organic and inorganic forms of life either spring from the earth, or are dependent upon it for existence, or are found within its

bosom. Soil is the crust of the earth, its surface, and that which immediately lies beneath the surface. Soil is thus

Importance of soil: only a part of the earth, but it is that part which is of greatest significance to civilization. If it is fertile, life will flourish; if depleted and exhausted, life will be difficult and precarious; and if barren, life will wither and fade away. Soil productivity, therefore, is the foundation of civilization.

Since this principle of fertility or productivity is at the basis of progress and prosperity, it becomes important to inquire whether there is any economic law according to which the soil yields its return. It will be

Law of diminishing returns. found that there is such a law, and that it applies not only to the surface of the earth, but to the wealth deeply embedded within the earth itself. This law, as applied to the soil, shows that, after a certain point has been reached in its cultivation, land will yield a smaller and smaller return in proportion to the labor and capital applied to it. This law is known as the law of diminishing returns from land and may be stated as follows: after a certain point has been reached in the cultivation of a given piece of land, it will be found that doubling the labor and doubling the capital applied to that land will not double the return from it.

Take, for example, the case of a typical farm in the wheat-growing section of the country. We know that all production requires three factors: land, labor, and capital. Let us apply successive "doses" of labor and capital to a unit of this land and observe the effect upon the wealth produced, that is, the number of bushels of wheat which it will yield. The first unit of labor and the first unit of capital applied to this unit of land will yield, let us say,

eight bushels of wheat. Two laborers and an additional unit of capital, in the form of more effective agricultural implements, will yield an additional twelve bushels of wheat, or twenty bushels altogether. It will even be found that, if we apply three units of labor and three units of capital (a rich fertilizer being added to the capital already invested) to this same land, it will produce sixteen additional bushels of wheat, or thirty-six bushels in all. So far, therefore, the results obtained from this application of labor and capital to the land may be represented by the following table :

Land	+	Labor	+	Capital	=	Wheat
1	+	1	+	\$ 40	=	8 bushels
1	+	2	+	\$ 80	=	20 "
1	+	3	+	\$120	=	36 "

It will be observed from this table that we have succeeded, first, in doubling the original labor and capital and in more than doubling the original yield ; and, secondly, in tripling the original labor and capital and in more than tripling the original yield from the given unit of land. That is, in each case, the return from the soil has increased in greater proportion than the increase in the labor and capital applied to it. But here we reach the peak of production. If we apply another dose of labor and another dose of capital to this land, its return may increase, but not proportionately to the previous increasing returns from the land. The return may be increased absolutely, but not relatively. In fact, the time will come when it will not pay the farmer to attempt to produce more wheat from the acreage under cultivation. His land will, therefore, yield a proportionately diminishing return at some point in

its cultivation. This decreasing ratio may be represented by the following table :

Land	+	Labor	+	Capital	=	Wheat
1	+	4	+	\$160	=	49 bushels
1	+	5	+	\$200	=	57 "
1	+	6	+	\$240	=	59 "

Thus agriculture is subject to the law of diminishing returns, the consequences of which are far-reaching. To realize the full significance of this law, it must be remembered that it applies not only to the soil, but to mines, fisheries, water power, and other natural resources. When, therefore, a civilization begins to feel the effects of its operation, a decline in prosperity follows, unless forces counteracting its operation are discovered. The crumbling of ancient empires and the decline of Eastern and Mediterranean civilizations have been accounted for on this basis.

But this law has been stated here chiefly for its historical significance, and in order to make us realize more forcibly the tremendous advantage enjoyed by the United States in this respect. Here and there, undoubtedly, one may observe the operation of this law in America. For example, in certain mining industries the return has declined in proportion to the labor and capital applied; and in specific agricultural districts, because of inadequate soil conservation, the yield has decreased in proportion to the labor and capital applied to the soil. But these are only isolated instances which, indeed, it is most important to bear in mind when considering the necessity for conservation in our national life. When, however, we consider the remaining undeveloped natural resources of the United States, its still fertile soil and un-

*America's
advantage.*

touched mineral deposits, we realize more than ever the advantage which this nation enjoys, as compared with the civilizations of the Old World, in regard to the operation of the law of diminishing returns. Furthermore, American inventive genius is always struggling to counteract this law wherever its operation is noticeable.

Minerals of the United States. — If, now, we look under the surface of the earth, we shall find that nature has equally endowed the United States with rich mineral deposits. This kind of resource has **Their im-
portance.** always been of value to mankind, but it is only with the advent of modern industry that it begins to assume its greatest importance. In primitive civilizations, stone, bronze, iron, tin, zinc, gold, silver, and other minerals were used for ornaments, for weapons, and for like purposes. In advanced civilizations, however, minerals determine largely the direction of national progress and the extent of national prosperity.

For convenience of discussion, minerals may be divided into two groups: fuels and ores. Of the fuels, coal is by far the most important. As a factor in pro- **Kinds of
minerals:
Coal.** moting prosperity, it is second to none of the minerals in its threefold function of providing heat, light, and power. One hundred years ago the nation had a supply of coal paralleled only by that of China. To-day, however, some authorities tell us that, at our present rate of increase in consumption, the available supply of anthracite coal may be exhausted in fifty years and the available beds of high-class bituminous coal in about one hundred and twenty-five years. In striking contrast to this alarming prediction, the United States Bureau of Mines estimated in 1920 that the supply of

minable coal in the United States amounted to 3,553,673,-100,000 tons, or enough to last seven thousand years at the present rate of consumption. It is probable that both of these estimates are exaggerated.

Coal exists in three forms: anthracite, bituminous, and lignite. Anthracite coal contains the highest percentage of carbon and is the most valuable as fuel. The available fields of anthracite, located in Pennsylvania, are being gradually exhausted. Bituminous coal, which contains less carbon and is less desirable for domestic consumption, can be used for almost all commercial purposes. Furthermore, it exists in nearly all parts of the country. The third form of coal, known as lignite, consists of vegetable matter which has undergone chemical change and is much less valuable commercially. Vast fields of this lignite have been found in the Northwest. If its use can be made commercially profitable, it may be the coal of the future.

The other mineral fuels, petroleum and natural gas, which have been discovered in connection with most of the coal fields, are being rapidly utilized. Already *Petroleum and gas.* abundant supplies in Pennsylvania have been depleted. Ohio, Indiana, Illinois, and West Virginia are failing to increase their supply; and the time may soon come, perhaps within a quarter century, when the better forms of petroleum and natural gas in this country will be commercially unusable because of their scarcity and high price. In fact, in 1920, it was estimated that only 7,000-,000,000 barrels of oil were remaining in the United States, or enough to last eighteen years at the present rate of consumption. However, in the Southwest, many new forms of petroleum have been discovered which may, with the

advance of chemistry, replace and supplement the better grades now in use.

This question of the diminution of the fuel supply presents a serious problem. When men first lived in the temperate zone, they depended upon wood and peat for fuel. As civilization advanced, coal and oil came into use. With the exhaustion of these fuels, the temperate dwellers will be face to face with the problem of keeping warm in winter. Without some form of artificial heat, life in the temperate zone is impossible. What, then, shall civilization do? Furthermore, since modern industry is dependent upon power, mechanically produced, the future must discover some substitute for the vanishing mineral fuels. Though the immediate future is by no means certain, water power may ultimately prove an adequate substitute; while solar and tidal energy are as yet unknown quantities.

Among the mineral ores, iron and copper are by far the most important, and the apparent supply of these minerals is far larger than the available supply of coal. *Iron and copper.* Originally, bog ore was taken from the lowlands of New Jersey and Virginia and converted into iron and steel products. This bog ore industry was then displaced by the ore mines of Pennsylvania, which, in turn, have been supplanted by the ore fields of the Lake regions. In these latter fields, the ore lies on the surface and is frequently shoveled by means of steam power into cars, in exactly the same way that a gravel bank is removed.

Gold, silver, tin, lead, zinc, cement, brick clay, and stone are also produced in considerable quantities *Other minerals.* throughout the United States. While less important than iron, they nevertheless play a leading part in

determining the progress of an industrial civilization. Especially is this true of cement, brick clay, and stone, all of which are particularly valuable in structural operations.

These mineral ores together with the mineral fuels constitute the most exhaustible form of natural resources. A

The outlook. forest which is burned away may be replanted and replaced, but each ton of coal or iron which is mined is irreplaceable. It has disappeared, and, although some substitute for it may be found, the coal or the iron itself will never, at least in historic times, be replaced. Too much emphasis, therefore, cannot be laid upon the necessity for conserving minerals. When the coal is mined, all of the coal in the mine should be removed. The policy frequently followed of removing the easily mined coal and then permitting the mine to fall in, thus sealing up millions of less desirable fuel, is disastrous. Mineral resources are at the basis of every modern industrial society, and the welfare of both industry and society demands conservation.

We have seen, from this brief review of our soil and mineral resources, that, so far as they are concerned, nature has amply endowed the United States with the basis of progress and prosperity. Her great extent of territory, her fertility of soil, her variety of climate, her great mineral wealth still capable of conservation, all lead us to this conclusion.

QUESTIONS FOR RECITATION

1. Define land. Give examples.
2. Show how land has affected the division of occupations in the United States.
3. What are the four chief ways in which land aids man? Explain each.

4. Why is climate so important? Compare it with other natural resources.
5. Explain the relation between climate and efficiency.
6. Why do we speak of "mother earth"?
7. Explain the importance of soil.
8. Explain the law of diminishing returns from land, giving examples.
9. Is this law in operation generally throughout the United States? Defend your position.
10. Name the chief minerals of the United States in what you regard as the order of their importance.
11. What are the minerals most essential to industry? Why?
12. Show why the conservation of minerals in the United States is absolutely imperative.
13. Explain the different kinds and uses of coal.
14. What mineral is coming into greater prominence? Why?
15. What problem does the future have in store for us? In what ways may it be solved?

PROBLEMS FOR DISCUSSION

1. What is meant by the "economic interpretation of history"?
2. What physical reasons account for the greatness of Holland? Of Japan? Why did the former nation develop earlier than the latter?
3. When do natural resources cease to be free gifts of nature and become economic goods? Give examples.
4. What relation exists between the shape and location of land masses and man's development?
5. Why did civilization begin in semi-tropical regions and then move northward?
6. What other force, besides nature, is essential to the development of national life and character? Give examples to show its vital importance.
7. What are the chief natural resources of the United States? In respect of what resources is the United States preëminent?
8. Of what use is land to the lumberman? to the manufacturer? to the shopkeeper? to the traveling salesman? to the fisherman? to the aviator?

9. Why are iron and coal called the foundation stones of industry?
10. Discuss the evil effects of the law of diminishing returns from land. Show by historical allusions.
11. Explain the forces counteracting this law.
12. Give specific instances of the operation of this law in the United States.
13. Should we or should we not emphasize this law in our teaching of economics? Why?

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CHAPTER X

LAND RECLAMATION

- I. Reclamation by means of irrigation
 1. How accomplished
 2. First projects :
 - a.* Work of the Pueblos
 - b.* Work of the Mormons
 - c.* Operations in California
 - d.* The Horace Greeley project
 3. Recent development :
 - a.* Extent and value
 - b.* The Act of 1902 :
 - (1) What it provides for
 - (2) How expense is borne
 - (3) Future possibilities
 - (4) The work undertaken
 4. Advantages of irrigation
- II. Reclamation by means of drainage
 1. How carried on
 2. The swamp lands :
 - a.* Their extent and character
 - b.* The proposed work
 - c.* The Florida Everglades
 - d.* The Dismal Swamp
 - e.* Other swamp lands
 3. The problem before us

Not only is it possible, by increasing the efficiency of labor and the productivity of capital, for progressive

civilizations to delay the operation of the law of diminishing returns, but it is even possible, through the application of labor and capital, to reclaim for cultivation land which is apparently useless. In other words, soil fertility may be increased, not diminished, by scientific methods of conservation. This reclamation may take the forms of irrigation and drainage.

Reclamation by Means of Irrigation. — Irrigation is accomplished by the very simple process of transferring water from a place where it is not needed to a place where it is needed. Water is thus given place utility. Practically any stream or body of water, which is properly situated, may be utilized for irrigating arid land; or the water necessary may even be pumped from artesian wells. In this manner, vast stretches of parched territory may be brought under cultivation. Provided, therefore, there is somewhere available an adequate supply of water which may be transported through canals, irrigation is always possible wherever there is a shortage of rainfall.

The first irrigation in America was undertaken by the Pueblo Indians and the Cliff Dwellers who lived in New Mexico and Arizona. While their methods were of the crudest nature, their work was of such a substantial character that farmers still use some of their irrigation ditches. Scientific irrigation replaced these cruder methods when the Mormons under their great organizer, Brigham Young, began their conquest of the Utah desert. Starting just before the middle of the nineteenth century, the irrigation work of the Mormons has spread until it covers tracts in Utah, Wyoming, Idaho, and Arizona.

First projects:

Work of Pueblos and Mormons.

A further step in the development of irrigation was made during the gold rush to California. The miners built sluices to carry water for their mining. Sometimes, when these sluices passed through fertile land, they were tapped either by the miners or by the farmers. In this accidental way, the ultimate value of irrigation was conclusively demonstrated and the foundation laid for the irrigation systems which have helped to make California one of the garden spots of the world.

*Operations
in
California.*

The Horace Greeley Irrigation Colony, named after the man who was most interested in promoting it, was started in 1870 in Greeley, Colorado, and furnished the nucleus of the irrigation "boom" of the eighties. During this boom hundreds of miles of canals were constructed at a cost of millions of dollars.

*Horace
Greeley
project.*

Since 1870 the growth of irrigation in the West has been rapid. In that year there were 20,000 acres irrigated; in 1880 the number of acres had increased to 1,500,000; in 1890, to 3,631,000; and in 1900, to 7,539,000. Of this irrigated land, eighty per cent was devoted to the raising of crops and twenty per cent to pasture land. While the total cost of providing the irrigation for this seven and a half million acres was \$67,770,000, the value of the crops in 1900 was \$86,860,000, or a return in one year of about twenty-five per cent more than the total cost of irrigation.

*Recent
growth:*

*Extent and
value.*

The greatest real gains, however, have been made since the passage of the National Reclamation Act of 1902, which provides for the construction of irrigation works under the direction of the Secretary of the Interior. Such works are to conform to state laws and

Act of 1902.

to be developed in accordance with local conditions. In order to prevent the concentration of ownership of irrigated lands in the hands of a few individuals, holdings under the Act are limited to 160 acres for any one person.

Under this Act of 1902 the expense of the construction and improvement of an irrigation system must be met from the sale of public land. In this way the work was started. The settlers who take up irrigated lands are required to pay to the government, in ten equal yearly installments, the cost of irrigation; so that at the end of ten years the government has returned to it an amount of money equal to the amount spent the previous decade on the irrigation system. In order to insure a democratic method of administration, the irrigation plant is turned over to the community as soon as it has been paid for. Thus the responsibility for the successful management of the system rests on the local community rather than on the authorities at Washington.

In the aggregate, the seven and a half million acres of irrigated land sounds like a great amount; but, when compared with the possibilities of developing systems of irrigation, it is only a small beginning. There are approximately seventy million acres of arid or nearly arid land which may still be irrigated. The work already done, therefore, covers a little over one-ninth of the irrigable land of the country.

Since the passage of the National Reclamation Act of 1902, the government has undertaken the construction of irrigation projects which will irrigate about five million acres of land, or an area equal to the present total acreage of crops in Connecticut, Massachusetts, New Hampshire, and Florida.

The advantages of irrigation are best seen by a comparison of the conditions under which farmers in the East and in the West are obliged to work. An Eastern man, who recently visited some of the Western irrigated lands, was asked on his return what he thought of the Eastern agriculture as compared with that of the West. "Oh," said he, "it is a poor substitute for irrigation." Continuous sunshine and a sufficient water supply, furnished when wanted and in exactly the right quantities, form a sharp contrast to the fickle climate of the East.

**Advantages
of
irrigation.**

Reclamation by Means of Drainage. — The reclamation of land by drainage, which constitutes a main feature of the Act of 1902, is in no sense less important than the work of irrigation. The eight million acres of land which have been drained up to the present time have been reclaimed chiefly through private State initiative. The national government has done practically nothing in this direction.

**How car-
ried on.**

In the United States there are over sixty million acres of swamp or overflowed lands. The notable thing about swamp land is that it is frequently of very high quality. Take, for example, the swamp lands along the Mississippi. They consist of rich, deep soil that has been deposited by the river throughout the ages. This soil is formed of the finest silt, the scourings of many different kinds of rocks carried down from the headwaters of the Mississippi and its tributaries. When, in contrast to this, one considers that in certain sections of the country farmers are attempting to raise crops on poor soil eight or ten inches in depth, it will readily be seen that swamp lands when drained will present

**Swamp
lands:
Extent and
character.**

opportunities far superior to those now offered by the average farm land.

At the session of 1905-1906, Congress appropriated \$15,000 for the purpose of surveying the swamp lands on the ceded Chippewa Indian reservations in Minnesota. *The proposed work.* The report on the survey shows that it is possible to drain 267,000 acres of land and to improve 135,000 additional acres. The total cost of this work is estimated at slightly over \$1,000,000, while the cost per acre will vary from \$1.62 to \$3.23. Since this is a region in which drained lands are worth from \$12 to \$15 an acre, the government can readily afford to invest in the project.

Perhaps the two best known swamps are the Florida Everglades and the Dismal Swamp of Virginia. *The Florida Everglades.* The Everglades is a swamp during the wet season only, and even then there are stretches of prairie. These, however, are rendered inaccessible by the water runs. Some private attempts have been made to drain the Everglades, and these have been singularly successful. The soil, consisting of silt and decayed vegetable matter, ranges from three to fifteen feet in depth and is remarkably rich. The Everglades cover more than three million and a half acres, a large portion of which is drainable at reasonable expense.

The Dismal Swamp is covered by patches of water which are seldom more than two or three feet in depth. *The Dismal Swamp.* Like the Everglades, the Dismal Swamp presents no serious engineering difficulties. It is merely a big project which must be handled on a large scale and which consequently must not be left to individual or state authorities.

In Louisiana near New Orleans, in Minnesota, in North

Dakota, in the Red River Valley in Oklahoma, and in parts of California, considerable draining has been privately undertaken and has met with great success. But reclamation projects, like those of *Other swamp lands.* irrigation, must be undertaken on a scale which is too vast for individual enterprise and which can be most justly and equitably administered only by an agency of the Federal government.

There are over 70,000,000 acres of land available for cultivation and wonderfully rich in productive power, if only water can be supplied to them in sufficient quantities. On the other hand, there are another 60,000,000 acres which will become wonderfully productive, if they can be properly drained. *The problem before us.* The problem of supplying the water in one case and of removing it in the other is intricate, demanding careful study, highly specialized mechanical appliances, and vast outlays of capital. It is therefore apparent that such conditions can be best met, not by individual or state action, but only by the effective power and authority of the central government.

QUESTIONS FOR RECITATION

1. Define land reclamation; irrigation.
2. Why is land reclamation important?
3. How may irrigation be accomplished?
4. What was the earliest irrigation project in America?
5. Explain the later projects of the nineteenth century.
6. Give the provisions of the Act of 1902.
7. What are the advantages of irrigation?
8. Where are the principal swamp lands of the United States?
9. How has the drainage of swamp lands heretofore been chiefly provided for?
10. What problem confronts the United States with regard to both phases of land reclamation?

PROBLEMS FOR DISCUSSION

1. What does irrigation show us in regard to man's control over his environment?
2. Is the government interfering with a "divine plan" when it irrigates barren land?
3. In what sense is Eastern agriculture "a poor substitute for irrigation"?
4. Why was irrigation not taken up by the government earlier in the history of the country?
5. What is yet to be accomplished by means of irrigation?
6. Is it better to irrigate the land of the United States or to go over into Canada and take up the "free land"?
7. Has the purpose of the Act of 1902 been accomplished?
8. Why are swamps so rich?
9. Why are they not more extensively drained and used?
10. On what grounds can the national government justify its activities in the reclamation of land?
11. Show what has been accomplished in Europe in regard to land reclamation.
12. Discuss the relation between rainfall and density of population.
13. Discuss the relationship existing between land reclamation and the law of diminishing returns.

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THE
OF
FOREST
CONSERVATION

CHAPTER XI

FOREST CONSERVATION

- I. The forests of the United States
 1. Their importance
 2. Groups of forests :
 - a. The Northeast Forest
 - b. The Southern Forest
 - c. The Lake State Forest
 - d. The Rocky Mountain Forest
 - e. The Pacific Coast Forest
 3. Consumption of wood
- II. The destruction of forests
 1. The causes :
 - a. Effect of early attitude
 - b. Forest fires
 2. The effects :
 - a. On the wood supply
 - b. On freshets and floods
 - c. On washouts
 - d. On droughts
 - e. On water power
 3. The remedy

Forests of the United States. — Forest resources, when properly conserved, constitute one of the greatest sources of national prosperity and social welfare. Although forests are usually thought of as sources of lumber supply, their greatest value lies in the part they play in the conservation of soil moisture. While lumber is

Their im-
portance.

important and production at times depends upon it, substitutes for wood may be found. But for soil moisture there is no substitute; every crop of grain, vegetables, and fruit depends upon it. Its conservation, therefore, is a matter of utmost importance. In addition to maintaining soil moisture, forests, by insuring a regular stream flow, guarantee constant water power and regular water transportation. Considering, therefore, their direct and indirect value, forests serve as many useful purposes as any other natural resource.

A forest survey of the United States shows that five groups of states embrace the naturally timbered areas of the country, — the Northeastern States, the Southern States, the Lake States, the Rocky Mountain States, and the Pacific States.

In the Northeast district the present stand is mainly spruce, and second growth of white pine, hemlock, and hardwoods. For many years the most characteristic tree of this forest was the white pine, a tree that has long enjoyed great commercial importance. The chief district where this tree grows in marked abundance is in the confines of northern United States. This white pine is soft, light, easily worked, suitable for the cabinetmaker, joiner, carpenter, and pattern maker. Formerly this wood was used for general construction to a greater extent than any other wood in the United States. But white pine is now becoming so scarce that the best grades have risen in price enormously. In this Northeastern Forest another tree is worthy of special mention, — the spruce, which is extensively used for wood pulp.

In the South are found four types of forest, which, broadly speaking, may be said to divide the land among them

according to elevation above sea level. The swamp forests of the Atlantic and Gulf coasts and the bottom lands of the rivers furnish cypress and hardwoods. The remainder of the coastal plain from Virginia to Texas was originally covered with Southern or "yellow" pine, — the trade name under which the lumber of several pines is marketed. The plateau encircling the Appalachian range and the lower part of the mountain region itself support a hardwood forest, while the higher ridges are occupied by conifers, — mainly spruce, white pine, and hemlock.

The Lake States still contain many hardwood forests in their southern portions. In the north the coniferous forest includes, besides the rapidly dwindling pine, considerable tamarack, cedar, and hemlock.

The forests of the Rockies occupy isolated mountain chains separated by grazing lands, deserts, or cultivated valleys. The location of these isolated patches of forests is determined largely by the degree of moisture and the extent of forest fires. The chief timber trees of this belt are Western yellow pine, a species of spruce, and the red fir.

The last great stretch of woodland is the Pacific Coast Forest, extending along the coast west of the Rocky Mountain Forest, and running through the states of California, Washington, and Oregon. This forest is the most densely timbered of any in the country, perhaps in the world. The characteristic trees of the district are of the fir species, especially that known as the Douglas fir. Other trees found in addition to the Douglas fir are the Western hemlock, Western yellow pine, redwood, and cedar. Thus the forest areas of the United

States contain a wide range of both conifers and hardwoods.

The United States was endowed originally with rich forest resources; but, like a spendthrift, the nation has consumed these riches in an extravagant fashion.

Consumption of wood.

According to government figures the population of the United States from 1880 to 1900 increased fifty-two per cent, while the increase in lumber cut during the same period was no less than ninety-four per cent. Our present annual consumption of wood in all forms is more than three times as great as the annual growth of our forests. So great has been this increase in the consumption of wood that the source of supply has steadily shifted westward, until to-day the product of the Pacific States furnishes a large proportion of the total output of the country.

Destruction of Forests. — Because so many forest tracts have been cut over and left desolate, the United States

Causes:

Effect of early attitude.

has now reached a point where its remaining forests are vitally important. This forest destruction may be said to have resulted originally from the effect of our early attitude toward forests. To the American settler the forest was an enemy. Not only did it stand in the way of the development of agriculture, but it sheltered Indians and wild beasts. Therefore, the early settler naturally said, "Why take care of an enemy?" Accordingly, he began, as rapidly as possible, to clear the land of forests and to devote it to the purpose of sustaining life. In this way a habit of mind was engendered that has had its logical outcome in the action of the "timber butcher," who clears the land of everything "ten inches through and eighteen inches from the ground."

Another cause of the destruction of forests is the spread of forest fires, against which little, if any, scientific means of prevention has been taken. This loss from fire has been estimated at fifty million dollars annually. *Forest fires.* In unsettled districts the sparks from locomotives start these fires, which, unchecked, except by adverse wind and natural barriers, gain good headway before they are discovered, and burn over thousands of acres of forest land. This was the case in 1893 with the Hinckley fire in Minnesota, which destroyed millions of dollars' worth of property and hundreds of lives. This fire smoldered for two weeks before a high wind came and drove it fiercely through the forests. At any time during these two weeks, an effort on the part of skilled foresters could have extinguished the fire and saved the lives and property later sacrificed.

What, now, are the effects of this willful destruction of forests? Naturally the first result of the ruthless cutting and destruction of timber is to deprive the community of its supply of wood. *Effects: On wood supply.* Experts tell us that, at our present rate of consumption, our supply of commercial timber will last but another generation. This problem, while very serious in itself, might be solved through the importation of wood, or the gradual replanting of forest areas. There is, however, another phase of this question still graver in aspect.

When a mountain range is cut clean of timber, the brush and limbs are left scattered over the bare tract. A dry season comes and a passing hunter drops a *On freshets and floods.* match, or a locomotive throws a spark, among this brush. The consequence, as we have seen, is a forest fire. The fire, supplied with the most combustible materials in the way of dried branches and leaves, burns fiercely.

Most of the vegetable matter is removed from the top of the ground, and the surface of the earth is baked hard. Then comes a rain, which, instead of soaking into the ground as it ordinarily does in a wooded district, runs off rapidly into the streams, causing a freshet. If the rain has been extensive enough and has covered a large tract of deforested country, the result is a flood of serious proportions.

Again, in agricultural districts where the timber has been cut from the top of hills, a heavy rain, running off rapidly, washes the soil from the slopes down
On washouts. into the valleys. One of the great problems which mountain farmers, who have allowed their timber to be removed, now face is that of preventing washouts on the sloping fields.

There is still another phase of the problem. As it exists in nature, the spongy vegetable matter in the forests holds the water which falls in rainy seasons,
On droughts. and allows it to filter gradually off into the springs and streams during the drier times. Where forest areas have been destroyed, drought is becoming a serious problem in many agricultural regions during the late summer months. In districts where forests have been removed, men are surprised to find that springs and streams dry up in the summer.

Finally, the results of deforestation are not all direct. The industries of the country are depending more and more upon water power as a motive force. In
On water power. districts where turbines have been set up and water power is being converted into electricity, low streams in the dry summer months force the factories to close temporarily. One of the greatest drawbacks to generating

power on small streams, therefore, is the fact that they are flooded with water in the spring and empty in the fall. If there were timber land at the headwaters, both conditions would be obviated.

Thus we see that a shortage of timber supply, with a consequent rise in the price of lumber, disastrous freshets and floods, the washing away of sloping lands, and the failure of springs and streams are all phenomena resulting from deforestation.

These evils can be remedied only by a vigorous policy of conserving our existing forests, and by entering upon a national campaign of reforestation. If, at **The** our present rate of consumption, the timber **remedy.** supply of the country will last but a generation, it is absolutely necessary that every stick of it should be guarded; that it should not be wantonly destroyed through forest fires or timber cutting; and that proper provision should be made for replacing every tree consumed. To meet this situation state action is inadequate; a comprehensive national policy is imperative. The United States must follow the example of European countries and insist upon a rigid policy of conservation of its remaining forest areas.

QUESTIONS FOR RECITATION

1. Explain the importance of forests.
2. Describe the chief groups of forests in the United States.
3. What are the uses of white pine? Where is it found?
4. What woods have the widest use commercially? Where are they found?
5. Where are the largest trees found in the United States? Of what use are they?
6. Compare our yearly consumption of wood with the annual growth of trees.

7. Show the necessity of conserving our forests.
8. What was the attitude of the early settler toward forests, and what was its effect?
9. Show how forest fires originate and the harm they accomplish.
10. Discuss the chief effects of the destruction of forests.
11. Describe the remedy for the evils of deforestation.

PROBLEMS FOR DISCUSSION

1. Contrast two regions in the United States, — one where forests have been destroyed, the other where forests have been conserved.
2. Discuss what scientific forestry means.
3. Describe the forestry service of France or Germany.
4. What would scientific forestry do for the United States?
5. What steps have thus far been taken?
6. Apply the law of diminishing returns to forests.
7. Discuss the work of Gifford Pinchot.
8. What justification can be advanced for government forest reserves?
9. Outline the chief points in a comprehensive policy of forest conservation.
10. Outline the economic advantages of preserving the forests.
11. Describe the work of your State University in forestry.
12. Draw a map locating the great forest areas of the United States.

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CHAPTER XII

WATER POSSIBILITIES

- I. Water as a source of power
 1. Its early use
 2. Why used to-day
 3. Method of utilization
 4. Examples of utilization :
 - a. At Niagara Falls
 - b. On the Pacific Coast
 - c. In the future
 5. The resulting problem
 6. The attempted solution
- II. Water as a means of transportation
 1. Our inland waterways :
 - a. Their great extent
 - b. Their early importance
 - c. Why valuable to-day
 - d. Effect of Panama Canal
 - e. Water transportation cheap
 2. Problems of the Mississippi River :
 - a. The cutting of the banks :
 - (1) The cause
 - (2) The remedy
 - b. The flooding of the river :
 - (1) The cause
 - (2) The remedy
 - c. The cost of conservation
 3. General conclusion

Water as a Source of Power. — One of the resources which the early colonists found in comparative abundance

was water power. Throughout New England and in certain parts of the South, there were innumerable streams which had a high gradient and from which considerable water power could be developed. Therefore, when manufacturing was begun in the colonies, the power used was naturally water power. The water wheel was set down directly in the stream, a race was constructed, and the revolving wheel was connected by belts and shafts with the machinery in the mill.

However, the discovery of coal, the application of steam to industry, and the development of steam-propelled machinery, which came between 1750 and 1825, completely revolutionized the source of power utilized in American industries. When the great coal beds were discovered, there was an immediate rush to exploit them; and during the nineteenth century the United States occupied itself in mining coal as fast as it could be used in industry. With the advent of the twentieth century, however, a change occurred which very materially altered the situation. Coal, particularly anthracite coal, rose in price to figures which became almost prohibitive in certain industries. The situation was also aggravated by labor troubles which rendered the coal supply at times uncertain. In addition to this, experts declared that the available supply of coal in the United States might be exhausted in from fifty to one hundred and twenty-five years. At the same time, it was estimated that the development of water power in the United States would produce an equivalent of 780,000,000 tons of coal a year.

Under these circumstances attention was directed toward the utilization of water as a source of power. The develop-

ing knowledge of electrical appliances made possible a revolution in the methods of using water power. The old waterwheel was abandoned; electrical turbines were installed at the stream; the water power was converted into electricity, and this was communicated over wires for great distances. Method of utilization.

The most noteworthy instance of this conversion of water power into electricity is seen at Niagara Falls. Here are situated two plants. The one below the Falls on the American side is located in the Gorge. The water for its use is drawn from the upper Niagara River; it then runs through the city of Niagara Falls and is discharged near the first Suspension Bridge. This plant is so situated as to be able to utilize a fall of two hundred and fifteen feet of water. However, it has certain obvious disadvantages. First, its buildings disfigure the Gorge; and, in the second place, the plant is difficult of access. Examples:
Niagara Falls.

The power plant above the Falls is a rather novel one. To construct it a pit one hundred and fifty feet deep is dug in the solid rock, and at the bottom of this pit the turbines are placed. The motion generated in the turbines is returned to the electric generators at the surface by means of steel shafts. The power generated at the Falls supplies not only the industrial plants in the immediate neighborhood, but the electricity is carried to Buffalo, where it is used as a source of power for trolley cars, for street and house lighting, grain elevators, and factories.

While this is the most notable example in the country of the development of water power, the Pacific Coast also presents instances of its utilization. The important thing about Niagara Falls is the volume of its water. On the

Pacific Coast there are no bodies of water so large, but the fall which is secured is very great. For example, a part of the electric power used at San Francisco is supplied from a plant located at the foot of a hill five hundred feet high, down which the water for the generation of the electricity is carried in steel tubes. The velocity of the water when it reaches the power plant is stated at fourteen thousand feet per minute. After the power has been generated in this plant, it is carried one hundred and fifty miles, at a pressure of from forty thousand to eighty thousand volts, with a loss of about one-fourth of the power.

There are many other sections of the country where in the future the use of water power may become general.

In the future. The falls at Sault Ste. Marie between Lake Huron and Lake Superior have a drop of only twenty feet, and yet the volume of water is so enormous as to make possible the development of a great amount of power. Likewise, the innumerable small rivers along the Atlantic Coast furnish in the aggregate a considerable source of water power. Again, those who propose regulating the flow of the Mississippi River by the construction of reservoirs at its headwaters estimate that from these reservoirs about fifty million horse power may be developed.

The real impetus to the use of water power in modern industry was given in the last decade of the nineteenth century, when it was found that, by means of it, electricity might be cheaply generated and then carried great distances for commercial purposes. Indeed, the possibilities of water power have become so great that many conservationists who are working for the proper care of natural resources have shifted their emphasis from

The resulting problem.

the conservation of forests and minerals to that of water power. This they have done because they realize that individuals and corporations, through a monopoly of water power sites, might secure an unshakable grip on one of the most valuable natural resources of America.

For the purpose of protecting these sites and at the same time to make possible the utilization of water power resources, Congress in 1920 enacted a water power bill which permits the leasing of water power sites by the Federal government. In this manner the solution of this vexatious problem is attempted. Under the provisions of this law a commission, consisting of the Secretaries of War, Agriculture, and Interior, is empowered to lease, up to fifty years, the water power rights on all public lands, forest and Indian reservations, and on navigable streams. With the lapse of the lease, the government has the option of taking over at an appraised valuation the plants that have already been constructed, or of re-leasing them, or of leasing them at the appraised valuation to any company the commission may choose. Thus the property rights remain with the government, and the water power commission is authorized to specify the royalties to be paid the government under the leases. In the West, where water power sites are plentiful, the application of this law is especially valuable to social development.

Water as a Means of Transportation. — Quite a different problem is presented by water transportation. Here, there is no danger of monopoly, since the ownership of the transportation facilities already lies in the government. In the United States, therefore, the problem of water transportation is solely a problem of wise use and development.

Nowhere in the world is there a duplicate of the inland waterways of the United States. On the north lie the

Inland waterways: Great Lakes, which provide eighteen hundred miles of navigable water; on the east and west coasts are numerous small navigable streams. *Their great extent.*

In the heart of the continent, reaching into twenty-two of the states, is the Mississippi River System, which is navigable for more than a thousand miles. Although the twenty-two states reached by the Mississippi River System furnish by far the greater part of all the exports of the United States, the bulk of the agricultural products, and more than half of the manufactured products, the river system is but little used for transportation.

The early colonists depended upon water transportation, as they did upon water power, because of the abundance of water and also because there was no other easy means of getting from place to place. *Their early importance.* The few roads that existed were wretched. Therefore the streams became the highways of trade and travel, and settlements were made either on the coast or along the rivers.

The application of steam to industry led to the gradual abandonment of both water power and water transportation. In both cases, however, the time has now been reached when steam power will no longer suffice; and, in order to maintain our industrial efficiency, it has become necessary to fall back upon natural power. In both cases, likewise, the diminution of the coal supply has played a leading part in the utilization of water. In the case of transportation, however, there is another factor of perhaps greater importance.

Why valuable to-day.

In prosperous years the railroads of the country are unable to handle the freight traffic. Some other means of transportation is therefore imperative.

The value of our inland waterways has been enhanced by the opening of the Panama Canal and by the development of trade with South America. This combination of circumstances makes the Gulf the natural outlet for a great amount of the produce of the Mississippi Basin. If to this fact is added the ease with which heavy freight may be shipped by water, it is plain that logically a great portion of the Mississippi Basin's heavier products will go to the Gulf by water.

*Effect of
Panama
Canal.*

The system of inland waterways and the network of regional canals combine to produce a vital effect upon the cost of transportation. Some idea of the relative cost of shipping by water and by rail may be gained by a comparison of the rates charged for the transportation of iron ore in the Great Lakes region. Between Pittsburgh and Lake Erie there is a commerce, composed chiefly of iron ore and coal, amounting annually to about 30,000,000 tons. The ore is carried by boat from Duluth on Lake Superior to Ashtabula on Lake Erie, a distance of one thousand miles, for about eighty cents per ton. The ore is then loaded on cars and carried to Pittsburgh, a distance of one hundred and thirty-five miles, for ninety cents per ton, so that it costs ten cents more to ship a ton one hundred and thirty-five miles by rail than it does a thousand miles by water. While these rates are constantly changing with cost of operation, it is always true that it costs much less to transport goods by water than by rail. The great danger here, however, lies in the fact that railroads endeavor to eliminate the

*Water trans-
portation
cheap.*

cheaper competitor by taking the water routes under their own control.

Thus water transportation possesses inherently a decided advantage over land transportation. To realize the full possibilities of transportation by water, however, we must make many improvements in the Mississippi River. In fact this river presents some serious problems. It is a stream of bad habits, the worst of which are the cutting of its banks, the formation of sand bars in its channel, and the severity of its floods.

The cutting of the banks is due to curves, technically called "meanders," and to the river's digging under the bank on the outside of the curve, particularly during flood times. Sometimes this cutting amounts to one hundred or one hundred and fifty feet a year. Since the channel is necessarily on the outside of the curve, and since grain elevators, docks, and other instruments of traffic must be reached by means of this channel, it is obviously impossible to carry on commerce satisfactorily if the river is undercutting the docks and elevators at the rate of one hundred feet a year.

The river can never be successfully prevented from cutting its banks until it is straightened. This may seem almost impossible; but several European rivers which were particular offenders in this respect were made narrower, the change resulting in a higher gradient and a more rapid current.

Besides straightening the river, we must control its seasonal floods. Spring floods and summer droughts are due in great part to the deforestation of the mountainous country at the headwaters of rivers. Great areas of land at the headwaters of the

**Problems of
Mississippi
River:**

*Cutting of
the banks.*

*Flooding of
the river.*

Mississippi and its tributaries have been practically deforested. Consequently, in rainy seasons, the water rushes off from the soil into the streams and causes flood damage farther down. Reforestation would eliminate much of this danger. The work may be further facilitated by the building of storage dams, which will check the floods and allow the surplus water to flow gradually down through the lower courses of the river.

The straightening of the Mississippi, the reforesting of the hills at its headwaters, and the building of storage dams on its principal tributaries to control floods may cost two hundred or even three hundred million dollars; but, if the full possibilities of the Mississippi Basin are to be realized, sooner or later these changes must be made. The development of water transportation will involve in the United States, as it has involved in Europe, a great outlay of capital; but, if the experience of England and Germany furnishes any basis for judgment, the outlay, even though it be a great one, will be more than justified.

*Cost of
conser-
vation.*

We have now completed our survey of the first factor of production, — the land of the United States. We have examined the typical resources of the nation, its fertile soil, its varied climate, its great mineral deposits, its forest resources, and its water possibilities. We have seen that nature has been prodigal in her gifts to America, and that man has often been equally prodigal in his use of these gifts. Conservation, in the form of irrigation, wise use, and thrift, is therefore essential to national well-being. But, through the efforts of the proponents of this ideal, the awakening of the social conscience has been accomplished in time to fulfill its

*General
conclusion.*

purpose. So far as the natural resources of the United States are concerned, it is therefore possible for the American people to achieve national prosperity and individual welfare.

QUESTIONS FOR RECITATION

1. Why was water power used extensively by the early colonists?
2. What led manufacturers to replace water power by steam?
3. What has caused the present tendency toward the increased use of water power?
4. Describe the modern method of utilizing water power.
5. Give examples of modern utilization of water power in the United States.
6. What problem has arisen from the modern use of water power? How has Congress attempted to solve this problem?
7. Describe the largest inland water system in the world.
8. Why was water transportation originally of special importance?
9. Why is water transportation important to-day?
10. Explain the effect of the Panama Canal upon inland water transportation in the United States.
11. Show why water transportation is cheaper than land transportation.
12. Discuss the problems of the Mississippi River.
13. What method should be followed in solving these problems? Why?
14. What conclusions do you draw from a study of the natural resources of the United States?

PROBLEMS FOR DISCUSSION

1. Discuss the advantages of modern water power over modern steam power.
2. What advantage has steam power over water power?
3. In what respect does a reversion to water power show progress?
4. What steps must be taken to secure the most economic use of water power?

5. How important were inland waterways before 1830?
6. Contrast the relative merits of the railroad and the inland waterway.
7. Why are the people of the United States laying new emphasis on inland water transportation?
8. Name the leading inland waterway systems of the United States.
9. Apply the law of diminishing returns to water power.
10. Discuss the reasons for the conservation of water power sites in the United States.
11. Discuss the effects of the Panama Canal upon world commerce.
12. How may water and other natural resources be developed and, at the same time, the interests of the public be protected?
13. Does conservation of the vast resources of Alaska mean a locking up of these resources? Explain.

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CHAPTER XIII

THE NATURE OF LABOR

- I. Labor as a factor of production
 1. Importance of labor :
 - a.* In production
 - b.* In the city
 - c.* In the country
 - d.* In modern industry
 2. Meaning of labor :
 - a.* Examples
 - b.* The moral element
 - c.* The final test
- II. How labor's productivity may increase
 1. Increase in efficiency :
 - a.* Why important
 - b.* How effected :
 - (1) Negatively
 - (2) Positively
 2. Increase in numbers :
 - a.* Through natural increase :
 - (1) The Malthusian Law
 - (2) Checks on population
 - b.* Through immigration
 3. The conclusion

Labor as a Factor of Production. — While there are three factors of production, — land, labor, and capital, — two of these are called primary because they are the original requisites of production. The first of these primary requisites is land; the other is labor. The United States

abounds in resources. To convert these resources into economic goods labor is required. Although the American Indian inhabited this continent for centuries, its vast resources were practically worthless because the Indian was not naturally a laborer. Labor is one of the foundation stones of production.

Its importance: In production.

Without labor, natural resources would be useless. Labor, therefore, bears the same relation to land that mortar does to bricks; it brings natural resources together into a permanent structure.

Labor has changed the face of the earth and nowhere is this more noticeable than in the city. Indeed, the modern city is almost wholly the product of labor. In primitive societies, where men live by hunting and fishing, nature supplies nearly everything. Even in the country districts to-day the trees, the grass, the flowers, the rich soil, the springs, the waterways, the clear sky, and the clean air are nature's gift. But in the city, natural things have been altered. The trees, the flowers, and even the grass are artificially placed and protected by warning signs. Water can no longer be secured from a near-by spring. It has been pumped through an aqueduct to meet the city's needs. Even the sky and air are polluted by smoke and dust.

In the city.

In short, the man who comes to the modern city and looks at it analytically will discover that natural things are at a premium. Labor has shaped every thing within sight. But evidences of labor do not appear in cities alone. The man plowing his ten-acre lot is laboring. The farmer's reaping machine, his house and barn, his macadamized road, his asparagus bed, his peach orchard, — all represent an outlay of labor.

In the country.

Again, modern industry is based on labor coöperation. The chair upon which you are sitting is the direct or indirect result of the labor of thousands of men, women, and children. It was cut as standing timber in the woods of Michigan with axes and saws made in New England factories. It was hauled to a sawmill on bobsleds, the bolts of which were made in Philadelphia, while the steel runners were manufactured in Pittsburgh. It was sawed by a band saw which in turn was produced in a great factory employing several thousand men. Then, in the form of sawed lumber, this chair was shipped to a furniture mill over a railroad employing a hundred thousand men. When it reached the furniture factory, the lumber went through a great number of processes until it was converted into a chair; and each tool in each process was manufactured in a different city in a different part of the country by a different set of employees. Finally, the finished chair was shipped on a great railway system to the city, where it was handled by a trucking company, delivered to the wholesale house, sold to the retail house, and eventually purchased by the present owner. In this process labor has evolved from the form of simple coöperation to that of division of labor and minute specialization in industry.

In economics, when we speak of labor, we do not mean merely manual labor, but all effort either mental or physical which is expended in producing economic utilities. That is, labor is industrial effort. The man who works with a pick and shovel is a laborer; so is the woman who works with a needle; so is the man who works with the pen; so is the man who works with a brush; so is the man who spends his time in directing the

Meaning of labor:

Examples.

energies of others in order that they may assist in production. All of these persons are "laborers" in the economic sense because the laborer is one who expends physical or mental effort in the creation of economic utilities.

But there is also a moral element in labor. While labor manifests itself in physical and mental activities, there is, nevertheless, a moral background to these activities. For example, the honest laborer is a better *The moral element.* and more efficient producer than the dishonest worker; the temperate are more productive than the intemperate; and the laborer of good moral standards is a more effective producer than one of loose morality. The adage "Honesty is the best policy" shows the economic value of a moral quality.

Another important point to bear in mind is the fact that labor cannot always be measured by immediate results. It is easy to see that the carpenter is a *The final test.* laborer because the result of his labor is visible and tangible. But what about the labor of the policeman, of the clergyman, of the lawyer, of the teacher? Such labor may extend over months of effort and yet bear no tangible form. Shall we say, therefore, that their labor is unproductive? Not if it can be shown that such labor has, either directly or indirectly, aided in the creation of material wealth. The creation of economic utilities is the final test of labor and these may be arrived at indirectly as well as directly. If the policeman protects life and property, and thereby indirectly aids in the production of material wealth, his effort is industrial effort and he is a productive laborer. Likewise the teacher, by increasing indirectly the power of the student to produce material wealth, himself becomes a productive laborer.

How Labor's Productivity May Increase. — Since labor in all its forms is an essential element in the production of wealth and in the maintenance of welfare, every effort should be directed toward increasing its productivity through the principles of conservation and efficiency: Since the conservation principle demands that the things of the present be used wisely and handed on to the future in the best possible condition, it may be applied to labor in exactly the same way that it is applied to natural resources. If men and women are overworked, badly fed, poorly housed, their efficiency will be lowered and hence their ability to produce will be lessened. As the family standard is low, the standard of their children will be low from birth. Thus the inefficiency and low standards of one generation will be reflected in decreased efficiency and lower standards in the next generation; so that the evil conditions, which play so large a part in making men and women evil, will be perpetuated. Hence there arises the necessity of adopting some policy of conserving the labor force of the country and of increasing its efficiency.

Both the welfare of the community and the efficiency of labor depend upon labor conservation. How, then, may this conservation be effected? Chiefly in two ways, — either through negative or positive measures. On the negative side, certain factors, like bad living conditions and insanitary or dangerous working conditions, must be corrected by purely repressive legislation. For example, laws are needed which will regulate the length of the working day; which will insure abundance of air and sunlight in both houses and factories; which will protect women and children against industrial risks

and accidents. This, however, is only one side of the question. It is no less desirable that the positive factors in the problem be considered. Welfare and efficiency depend upon education. Men in ignorance of modern working methods cannot do good work; and, since work to-day requires intelligence, it follows that the educated man will be the best worker. Furthermore, modern work, besides being arduous and monotonous, is wearing; hence some form of recreation and relaxation must be provided in order that efficiency may be maintained.

The productivity of labor may be advanced in the foregoing manner (1) by increasing the efficiency of each unit of labor, and (2) by increasing the total number of units of labor. That is to say, the labor force of a nation may have its productivity increased either through improving its efficiency, or through increasing its numbers. The increase in numbers may be from within or from without. When the increase takes place within, it is a natural increase brought about by an excess of births over deaths. For example, if each family contains four children, population will double itself every generation, and the labor force of the nation will be likewise doubled. If this increase occurs every generation, population will increase geometrically and the number of laborers may far outstrip the means of supporting them. This was the well-known view of Malthus, who propounded his theory in England at the close of the eighteenth century.

Increase in numbers:

Natural increase.

Malthus thought that, because land yielded its returns in a smaller ratio than labor multiplied, man's future would be gloomy and dreary. He pictured population as outstripping the means of subsistence. This situation did not

come to pass, however, because man has delayed the operation of the law of diminishing returns from land and, at the same time, has overcome the tendency of population to increase in geometrical ratio. Population has been checked by positive and negative means. On the positive side, wars, famines, and disease have kept population down; while on the negative side late marriages, prudence, and restraint have lowered the birth rate. In fact, to-day, in many places conditions are just the reverse of what Malthus pictured.

The labor force of a country may also be increased by additions from without, that is, through immigration.

*Through
immigra-
tion.*

Were it not for this method of increase, the labor force of the United States would not be nearly so large as it is. As the nineteenth century advanced, the native white birth rate declined. This decline, however, was often forgotten in the tremendous increase in the sum total of our population brought about by the vast influx of European immigrants into this country. This immigration furnished America with an ever-increasing source of labor supply from the beginning of its history up to the second decade of the twentieth century, when the World War temporarily interrupted the rolling tide of immigration to this country. When the war was over, however, this tide again set in.

Labor, then, is one of the primary productive elements. In importance it is co-equal with land or natural resources.

*The con-
clusion.*

It includes every phase of human activity which directly or indirectly adds to the sum total of material wealth produced in the world. As a factor of production its power may be enhanced by reason of an improvement in its quality or by an increase in its quantity.

Only through wise means of conservation and proper methods of education will the efficiency or quality of labor be improved. On the other hand, the quantity of labor may be increased (1) through the natural increase of population brought about by a rising birth rate or a falling death rate, and (2) through the medium of immigration into the country of vast hordes of laborers.

QUESTIONS FOR RECITATION

1. To what extent is labor essential in production?
2. Explain the relative importance of labor in the city and in the country.
3. Describe the part played by labor in modern industry.
4. Define labor. Give examples.
5. What is the difference between the American Indian and the white man? What effect had this upon America?
6. Explain the different elements in labor.
7. What is the final test of whether man's effort is labor or not? Give examples.
8. Tell why the effort of each of the following is or is not labor:
a. The physician. *b.* The stock broker. *c.* The card gambler.
d. The stock manipulator. *e.* The philanthropist.
9. In what two ways may labor's productivity be increased?
10. Why is efficiency in labor important? In what two ways may it be secured? Explain each.
11. Why is the number of laborers important? In what two ways may the number be increased?
12. Explain the natural increase of population. What was the Malthusian law of increase? Is it operating in America to-day?
13. Explain how the labor force of a country may be increased from without.

PROBLEMS FOR DISCUSSION

1. Discuss the relation between the amount of labor expended on an article and its selling price.
2. Should labor be the sole element in determining the cost of an article? Explain your position.

3. Has labor become more or less important with the development of machinery? Why?
4. Does the average street laborer work hard? Give your reason.
5. Of the street laborers that you have observed, which race works hardest? Prove your point.
6. What environmental advantages have American laborers over laborers in Europe?
7. Which do you consider more important: conservation of human energy or conservation of natural resources? Why?
8. What conclusions were drawn by the classical economists from their laws relating to land's increase and labor's increase?
9. What has interfered with the operation of these laws in the United States? What is the result?
10. May a distinction be made between the original labor force of the country and the group of immigrants at present coming to the country? Explain and give examples.
11. Is all effort labor? Defend your answer.
12. What is meant by "division of labor"; "specialization in industry"; "territorial division of labor"?

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CHAPTER XIV

THE LABOR FORCE OF THE UNITED STATES

I. The early settlers

1. Their origin:

a. The New England colonists:

- (1) Their characteristics
- (2) Their similarity
- (3) Their occupations

b. The Middle colonists:

- (1) Elements in the population
- (2) Their characteristics
- (3) Why they developed industry

c. The Southern colonists:

- (1) Their characteristics
- (2) Why they developed agriculture
- (3) Why slavery flourished

2. The conclusion

II. The later elements

1. From Northwestern Europe:

- a.* The Irish
- b.* The Germans
- c.* The Scandinavians

2. From Southeastern Europe:

- a.* The Italians
- b.* The Slavs
- c.* The Russian Jews
- d.* Other groups

3. The resulting problem

The Early Settlers. — Since the American Indian has never become a consistent industrial worker, American

labor is wholly of foreign origin. From the beginning of the seventeenth century until the present time, America

Origin: has been recruiting its labor force from various parts of the world.

In the early New England colonies the Puritan element predominated. Stern ideas of living, an abhorrence of

*The New
England
colonists.*

pleasure, and a strong sense of the holiness of work characterized this group. The Puritans came largely from the cities of England, where they were artisans and tradespeople. Their religion gave them deep convictions and high moral standards, and they were persistent in their efforts to achieve any end upon which they bent their energies. They adapted themselves easily to the new surroundings, forming a strong and persistent type of man and woman well calculated to overcome the difficulties incident to the conquest of a wilderness. Because of their independence in religious and political matters, they developed into strong individualists.

These early immigrants from England, together with those who came later from Scandinavia and north central Europe, made up a population whose home institutions and racial ideals were so nearly alike that there was little difficulty in welding them into a homogeneous group. Each new element which arrived from Europe was readily assimilated and formed an integral part of our early population.

This New England population very readily conquered the adverse conditions of northern geography and climate. They built ships because shipbuilding materials and harbors were abundant. They traded with the West Indies because the fish which they caught all along the coast formed an exchangeable commodity when salted and trans-

ported into the southern countries. They carried on manufacturing because the numerous rivers supplied much valuable water power. In short, the New England population measured up to the demands of the new surroundings and utilized them in a manner beneficial to the growing nation.

While the people who came to New York, Pennsylvania, New Jersey, and Delaware were of a somewhat different group, the basic elements of this population were *The Middle* the same as those of the New England settlers. *colonists.*

The Quakers of Pennsylvania, New Jersey, and Delaware came largely from England. They were joined by groups of Germans, Swedes, and Scotch-Irish, who settled on the land, developed the agricultural resources, and paid some attention to the establishment of manufacturing. In New York the Dutch were the first settlers, but they were later reënforced by groups of English and Germans.

Therefore, it may be seen that the general characteristics of the New England settlers were distributed pretty freely throughout the Middle Atlantic colonists. The people of this group were solid, industrious, intelligent, and God-fearing. Many of the newcomers came to America because they believed in a political or religious principle, and were willing to make sacrifices for it. If to these qualities are added the perseverance and adaptability for which the New England colonists have also become justly famous, a reasonable picture of this middle group is presented.

The people of the Middle colonies, like those of New England, developed industry rather than agriculture for two reasons — first, because their agricultural land was inferior in quality to that of the South; and, secondly, because the opportunities for developing industry were so

abundant. Not only could ships be built, but fishing could be carried on profitably. It was later discovered, too, that the deposits of iron ore could be worked, that hides could be manufactured, and that the textile industry was not only possible but lucrative.

In the South, the character of the early settlers was somewhat different from that of the Northern colonists.

*The South-
ern colonists.* The Southern colonists came to America largely from motives of gain. Here they expected to find gold and riches, and to recruit their falling fortunes. They also came to America to escape political and religious troubles, for many of them were royalists and members of the Established Church. They were an aristocratic and pleasure loving set, who desired to begin life anew on large and fertile plantations. Many representatives of the gentry and middle class were also among these early colonists. Since, however, hard physical labor had to be performed by some one, the upper classes imported to the new land many indentured servants and supported the traffic in slaves which had already been established.

In the Southern colonies, agricultural land was abundant and fertile. Then, too, the climate was suited to the production of tobacco, rice, indigo, and cotton. While industrial resources were slightly developed, the South devoted a great portion of its energy to agriculture, because from that occupation the greatest gains could be secured. Then, too, the land in the North was divided into small holdings, while in the South the land was laid out in large plantations worked by the indentured servants and slaves.

Slavery did not prevail in the North because there was no economic way in which the slave could be used. Slavery is desirable only when a large number of men can be

worked together under the charge of an overseer. In industry this is not possible. But since it is possible in agriculture, large groups of slaves were used profitably throughout the South. Thus the labor force of the North was composed almost exclusively of people working for their own advancement, while that of the South consisted chiefly of three classes, — the landowners, the indentured servants, and the slaves.

The early population of the United States was drawn almost exclusively from Africa and northwestern Europe. With the exception of the slaves, nearly all of those who came to America were members of one of the Baltic stocks. They had all developed their ideas and ideals in the same general part of the world and along the same general lines. In the North these settlers were therefore easily assimilated and developed into one compact group. In the South, however, the presence of a body of people who could not assimilate with the whites made the development of a homogeneous group more difficult.

The Later Elements. — The nineteenth century was characterized by three phases of immigration. In the first place, the old immigration of the eighteenth century was carried over into the early years of the nineteenth century; secondly, there occurred a great influx into America of Irish, Germans, and Scandinavians during the middle of the nineteenth century; and, thirdly, after 1880, a great change came over the racial character of the immigrants to this country. Just before the middle of the century, in 1847, occurred the great Irish famine brought about by the failure of the potato crop. This resulted in the immigration

From north-
west
Europe:
The Irish.

of millions of Irish to America and in the partial depopulation of the Emerald Isle. As a consequence there are as many Irish in the United States to-day as in Ireland itself. These people have become well assimilated into our population and have risen, both numerically and nationally, to a position of considerable importance in our political life. From an economic standpoint, the Irish, though sometimes unsteady, are bright, cheery laborers of considerable intelligence and natural capacity. While at first they were largely confined to the group of unskilled workers, they later attained great success in higher positions of an executive and professional character.

About the same time that the Irish came to this country in large numbers, great migrations of Germans to America likewise took place. The year 1848 was signalized by political revolutions throughout Europe and, in Germany, when they broke out, they were suppressed with great severity. This resulted in the exodus from Germany of vast numbers of people who sought political freedom in the New World. As the century wore on, this tide of immigration became so vast that over five millions of Germans came to this country. Because of their difference in language, these people were sometimes not so easily assimilated into our population as were the Irish and the English. In fact, during the World War, it was feared for a time that this group might place allegiance to their native country above that which they owed to their adopted land. But, happily, events disproved this position so far as the great body of Germans was concerned.

Scandinavians from Norway, Sweden, and Denmark also came to America in large numbers so that to-day there

are over a million of these elements in our population. The Germans have settled not only in large cities where they have become tradesmen and artisans, but *Scandi-* also in agricultural communities in Pennsylvania *navians.* and the Middle West. Similarly, the Scandinavians have settled in agricultural districts in the great Northwest, where they have engaged not only in farming, but also in the lumbering and transportation industries. From an economic standpoint, both the Germans and Scandinavians are steady, intelligent, careful, provident, and adaptable workers who have often risen from positions of minor importance to places of great power and influence in American life.

Since 1880 the source of immigration to this country has been gradually shifting from northwestern Europe to southeastern Europe. Besides the European *From* shift, bringing Mediterranean peoples to our *southeast* land, a number of French Canadians have also *Europe:* come into New England. While, therefore, the *The* Baltic countries of Europe furnished the early labor force *Italians.* of America, the south central and southeastern European countries are responsible for most of those migrating to this country since the closing decades of the nineteenth century. Foremost among these groups are Italians, Slavs, Russian Jews, Hungarians, and Eastern peoples. The Italians migrate to this country chiefly for economic reasons. So hard has the soil of their native country been worked, that Italians look with longing eyes to America, the land of opportunity and riches. Here they settle largely in the North and Middle Atlantic states, showing a frequent tendency to group themselves in the congested districts of large cities. They also settle in agricultural

communities and become small producers of fruits and vegetables. They are frugal and industrious workers, but are often handicapped by their ignorance of the English language. They vary also in disposition, according to their southern or northern racial characteristics.

The Slavs from the old empire of Austria-Hungary constitute another new element in our population. These people are of various racial stocks and are difficult to assimilate because of language as well as racial differences. Because of their illiteracy they are chiefly unskilled laborers, working in the mines of Pennsylvania and in other industrial regions. The Russian Jews are naturally intelligent and show a remarkable ability for advancement. They settle largely in cities, where they engage in commerce and the trades, which they prefer to agriculture and manual labor. Their family life is strong, while their racial characteristics are highly developed. The Hungarians, like the Slavs, settle in mining districts, or in their own little groups where they maintain many of their national characteristics. Finally, from the East come Greeks, Turks, Armenians, and Syrians, each of whom adds his quota to the development of our labor population.

It may thus be readily seen that, as contrasted with our early population, a vital change has come over the character of the people migrating to America. Such a change is fraught with great possibilities for good or for evil. Millions of American wage-earners were born abroad in lands whose economic and political ideals are far removed from our own, and millions more were born in this country of foreign parentage. Thus, a large portion of our labor force is made up, not of native

*Slavs, Jews,
and other
groups.*

*The
resulting
problem.*

Americans, but of foreigners or the children of foreigners. If we are to maintain the efficiency of labor, the problem which we are now confronting is to instill into this labor population the capacity for work, the power of application, the intelligence, the energy, the perseverance, and the adaptability in developing natural resources which characterized the early settlers.

QUESTIONS FOR RECITATION

1. Why is the labor force of the United States wholly of foreign origin?
2. Were the early American settlers immigrants? Explain your answer.
3. Contrast the original labor force of New England with that of the South in regard to:
 - a. Their industrial characteristics.
 - b. Their occupations.
 - c. Their moral ideas.
4. Describe the characteristics and occupations of the settlers of the Middle colonies.
5. Did the Middle group more nearly resemble the Northern or Southern group? Why?
6. Summarize the condition of the labor force of the United States as it existed at the beginning of the nineteenth century.
7. Contrast that labor situation with the conditions existing at the opening of the twentieth century. What factors were responsible for the change?
8. What elements came into our labor population towards the middle of the nineteenth century? Describe each group.
9. What has been the prevailing character of immigration to this country since 1880?
10. Describe the character of each of the later labor groups migrating to America.
11. What great problem has the change in later immigration given rise to? Explain fully.

PROBLEMS FOR DISCUSSION

1. Show how nature and man — land and labor — harmonized in the development of North and South in colonial days.
2. Discuss the salient characteristics of the early labor force of this country.
3. Has the Anglo-Saxon race any peculiar economic characteristics? Explain your answer.
4. Upon what grounds do Anglo-Saxons base their claim to political leadership?
5. Explain the great fluctuations of the movement of immigrants to the United States since 1820.
6. What change in the prevailing character of our immigrants has occurred within the last generation?
7. Will this recent immigration be of ultimate economic advantage to the United States? Why?
8. What traits do these immigrants possess that are not possessed by native Americans?
9. What steps should the United States take to Americanize immigrants?
10. Show how the law of the increase of population has been affected by immigration.

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CHAPTER XV

ECONOMIC ASPECTS OF IMMIGRATION

I. Causes of immigration

1. The object in view
2. Military and industrial reasons :
 - a. The European need
 - b. The American need
3. Political and religious aspect :
 - a. The early cause of immigration
 - b. How it reappears to-day

II. Effects of immigration

1. From a social standpoint :
 - a. The groups of immigrants
 - b. The character of the immigrants :
 - (1) Difference between North and South European peoples
 - (2) Why Northern races are preferable
 - (3) A possible danger
 - (4) What the new elements may bring
2. From an economic standpoint :
 - a. The labor affected
 - b. Effect of immigrant's standard
 - c. Findings of the commission
 - d. The restrictions imposed
 - e. The conclusion

Causes of Immigration. — The peaceful migration of great numbers of people from one nation to another is a modern phase of an old problem. In ancient times, if a land flowed with milk and honey, kings led their armies against it, enslaved or drove out the

Object in
view.

inhabitants, and took possession of the fields and cattle. Under such circumstances, the movement of a few thousand men from one state to another constituted a menace to social welfare. But, in modern times, millions of persons move from one nation to another without attracting more than passing notice. This movement, instead of being warlike, may take the form of a peaceful conquest of natural resources. However, it must also be remembered that "land" plays such a mighty part in national development as to cause nations, in our own day, to make relentless war upon each other for its possession and utilization.

The governments of the Old World, in order to insure the permanence of a large emergency army, wish to keep at home as many of their subjects as possible.

**Military
and
industrial
reasons.**

This necessity of military service has been one of the great causes of emigration from Europe.

On the other hand, in America we do not usually emphasize an increase in our military forces, but we do look continually for an increase in our industrial army. It is upon industrial recruits that we depend, just as European countries depend upon military organization. The immigration of a group of strong, intelligent men and women, therefore, makes a welcome addition to the ranks of American labor.

Religious and political persecution furnish another motive for emigration. The best elements among the early colonists left the Old World because they could not

**Political
and
religious
aspect.**

secure there a reasonable toleration of their political or religious views. They were progressive thinkers, — men who had such great faith in their convictions that they were willing to leave

their mother country and make a new home in a new world. A study of recent immigration shows that some people, notably the Jews, are still coming to America for the same reasons.

Effects of Immigration. — In order to understand clearly the effects of immigration upon our institutions, we must know first the character of the immigrants who have come to America. The three groups of European races, — the Baltic or Northwestern races; the Alpine or Central European races; and the Mediterranean or Southern races, — differ considerably in their social and economic characteristics. From the Baltic races have come the Scandinavians, the Germans, the English, and allied groups; from the Central European races; the Slavs, Russian Jews, Austrians, and Hungarians; while from the Mediterranean countries have come the Italians, the Greeks, and the Syrians.

From a
social stand-
point:

Groups of
immigrants.

With the change in the source of immigration from the northwest to the southeast of Europe there has been a corresponding change in the character of the immigrants themselves. The early Baltic immigrants were more highly educated, more easily adaptable to new surroundings, and, in addition to these two valuable characteristics, furnished a large number of skilled artisans and mechanics. In contrast with these, the later Alpine and Mediterranean immigrants show a high percentage of illiteracy and are prepared to do little except unskilled work.

Character of
immigrants.

Whether one of these racial groups is inherently more efficient than another we are not prepared to decide. It is apparent, however, that the immigrants of northern Europe are more highly educated and better adapted to our standards than the immigrants of southern Europe.

The north Europeans are more in sympathy with our political and industrial methods because their institutions approximate more closely to ours than do the institutions of southern Europe.

The presence of a large group of unassimilated immigrants, whose ideals and habits of thought are far removed from ours, presents to America the possibility of grave danger in the development of national character. This difference in attitude is not only political, but also economic and social, extending to central as well as to south European races. The World War disclosed, for a time, the menace of divided political allegiance brought about by difference in national ideals. Old World political traditions are out of harmony with American ideals, and the United States does not need the importation of any political or economic panacea sprung from the soil of oppressed Europe. Furthermore, the illiteracy, the poverty, and the low economic standards of southeastern Europe must not be reproduced in America. Hence, there arises in this country the necessity for a complete and thoroughgoing process of Americanization of foreign immigrants that must be conducted through the schools, the churches, the press, the public forum, and the government itself.

On the other hand, it is questionable whether the later groups of immigrants are not at times bringing to this country something which it really needs. For example, the Polish race is essentially musical and its æsthetic standards are very high; the Jews are highly intellectual; and the Italians are bringing to America artistic ability of a high order. If these various qualities, which have been more highly developed in some countries than in others, can be combined with the industrial efficiency of the Amer-

ican, the result may be a race of people more advanced than the world has ever known.

Apart from the racial contribution which the central and south European immigrant makes to this country, what is his effect upon the wage-working part of our population? Disregarding the children of the immigrant, who enjoy the benefit of the public school system, and considering only the untutored immigrant himself, it is clear that the mass of immigrants from southeastern Europe can have little or no economic effect except upon semi-skilled and unskilled labor. This is true because such immigrant labor is distinctly different from that of northwestern Europe. It is usually unskilled in technical knowledge, handicapped by lack of education, and often capable of performing only the hardest kind of physical tasks.

From an
economic
standpoint:

The labor
affected

The Russian, Hungarian, or Italian immigrant has come from a country where the standard of living of the working population is low. To him, windows and doors are often luxuries. In some places in Russia even a wooden floor is considered a luxury. Consequently, to many of the immigrants, the tenement house of our great cities is a desirable home. The immigrant will work for a low wage because he is accustomed to poor food and a small amount of clothing. The presence of large numbers of immigrants in any community will therefore result in a temporary lowering of the wage standard. In many localities this has often happened. As a result, it is rare in those localities to find American-born persons working as common laborers, because, accustomed to a high standard of living, they are unable to exist on the wage which the immigrant will accept.

Effect of
immigrant's
standard.

The Immigration Commission, appointed before the passage of the present immigration law, made its report to Congress after an extended inquiry into the various sources, character, and effects of immigration during the early part of the twentieth century. It concluded that the immigration of that time was detrimental to the best interests of the United States. Modern immigration, the Commission held, tends to lower social and industrial standards. The immigrant, a low-standard man in the country from which he comes, fails to grasp the significance of the higher American standards. He is willing to live in more congested quarters, to accept a lower standard of diet, and to work for less wages. The American, accustomed to higher standards, is unwilling to come down to the lower level. In the competition which follows he is inevitably beaten, because he must either lose his position or accept the standard set by the immigrant.

Accordingly, Congress set itself to the task of imposing new restrictions upon immigration. As far back as 1882 it had already passed a Chinese Exclusion Act. This was made necessary because of the peculiar racial, social, and economic characteristics of the Chinese laborers, who completely crowded out American labor in whatever competitive occupations they engaged. So low was their standard of living that no American could subsist upon it. Later, during President Roosevelt's administration, an understanding was arrived at with the Japanese government whereby Japanese immigration to this country was successfully restricted. Then, too, Congress, through its immigration laws, had already excluded various classes of undesirable immigrants, such as anar-

*Findings of
the Com-
mission.*

*The re-
strictions
imposed.*

chists, criminals, paupers, certain mental, moral, and physical defectives, and contract laborers. Finally, in order to satisfy the labor unions, Congress, over President Wilson's veto, passed an act imposing the literacy test on all immigrants. According to this act, all those who are unable to read or write are excluded from our shores. However, since there is a real need in America for a group of laborers who will perform the hard unskilled work to which the native American is averse, it is doubtful whether this test is the best that might be devised. It measures neither native ability nor biological fitness.

Whatever may be the ultimate effect of immigration, its present influence is clear. In the future the immigrant, or at least his American-taught children, will doubtless demand higher standards of life and work; but when, in normal times, hundreds of thousands or even a million annually leave the poorer districts of Europe and bring their low standards of life to the United States, the American laborer is confronted by a competition which will ultimately lower his standards and compel him to seek work elsewhere. It is evident, therefore, that from the standpoint of American labor, foreign immigration must be so restricted and regulated that the present standard of living of the native American may be maintained.

QUESTIONS FOR RECITATION

1. Explain two different methods of conquest of natural resources.
2. Describe the European impetus for emigration.
3. Why does the United States attract the immigrant?
4. What were the causes of the early immigration to America? Of the later immigration?

5. Divide European peoples into groups: (a) according to territory, (b) according to races.
6. Show clearly the differences among these groups.
7. Which group is more nearly like our early American stock? Why? What is the consequence of this?
8. What groups are most different from us? State the reasons and the consequences.
9. What good may result from this admixture of races in America? Explain fully.
10. What great danger might result? Give examples.
11. Outline a program for the complete Americanization of immigrants.
12. Explain clearly the chief economic effects of immigration upon American labor.
13. What has been done to protect American labor? Are these restrictions sufficient?
14. Contrast the American's and the Russian's standard of living.
15. Why are special restrictions imposed upon immigration from the Orient?

PROBLEMS FOR DISCUSSION

1. Point out the social and economic effects of immigration in the United States.
2. Would the American labor force be more efficient without the immigrant? Why?
3. How would heavy unskilled tasks be performed if the immigrant were excluded?
4. Account for the low standard on which the immigrant is willing to live.
5. Will Greeks, Italians, and Poles make good American citizens?
6. What is the underlying reason for permitting immigration into the United States? Is it justifiable? Explain.
7. Name the more important motives by which persons are (a) induced to leave the country of their birth, (b) attracted to other countries.

8. It is argued that cheap immigrant labor is like machinery — an added aid in production which relieves the native laboring class from heavy and disagreeable toil. Is the analogy true?

9. Is the manufacturer's argument for cheap immigrants valid from the point of view of society in general? Explain.

10. Should immigration be restricted? If restrictions are imposed, should they limit the number of immigrants, or fix a test of the quality of immigrants, or both? Why?

11. Would restriction of immigration be justified if the congestion of immigrants in cities and along the seaboard could be prevented, and the foreign elements distributed over the whole country? Explain.

12. State the arguments for and against immigration.

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CHAPTER XVI

THE RISKS OF LABOR

- I. Industrial accidents
 - 1. Kinds of accidents :
 - a. Railroad accidents :
 - (1) The causes
 - (2) The remedy
 - b. Mining accidents :
 - (1) The situation abroad
 - (2) The remedy
 - c. Other accidents
 - 2. Total annual number
 - 3. The labor affected
 - 4. Effects of accidents
- II. Dangerous trades
 - 1. Chief source of danger
 - 2. Danger from coal dust :
 - a. Character of the lungs
 - b. Effect on the lungs
 - c. How preventable
 - 3. Danger from lead poisoning :
 - a. Its effects
 - b. How preventable
 - 4. Other dangerous trades
 - 5. Recent progress

The risks to which labor is subjected in modern industry may be grouped under two heads ; first, those involved in industrial accidents, and secondly, those arising from dangerous trades and occupations.

Industrial Accidents. — Industrial accidents include those catastrophes which either temporarily or permanently destroy the efficiency of the wage-earner. They may be classified according to occupation; as *Kinds of:* railroad, mining, factory, and building accidents. Of these, the first two constitute by far the greater number.

The material regarding railroad accidents is compiled by the Interstate Commerce Commission and is furnished by the railroads as part of their reports to *Railroad accidents.* the Commission. No other American accident statistics are collected with such careful accuracy. A study of these statistics for the present century shows a steady increase in the number of such accidents. In one year alone 10,000 persons were killed and 100,000 injured in railway accidents (1907). Railroad casualties are not only appalling in number, but increasing in frequency. That there is no justification whatsoever for this increase is proved by conditions in foreign countries, where the infrequency of railroad accidents is in marked contrast to our own waste of human life. The causes of this waste of life through railroad accidents are found both in individual action and in corporate management. So long as individuals are careless, accidents will occur; and so long as corporations fail to supply devices for the safety of their employees and passengers, the same result will follow.

A remarkable proof of the fact that working conditions are largely responsible for these accidents is furnished by the beneficial effect of the federal law requiring automatic couplers. The passage of this act was followed by a reduction in the number of coupling accidents from forty-four per cent of the total number of casualties among trainmen to nine per cent; although, at the same time, the total

number of all railroad casualties was steadily increasing. Equally effective results would doubtless be secured by other forms of federal regulation concerning the length of runs, the character of signals, and similar protective measures. Railway accidents are enormous in number; but, by wise precaution and stringent legislation, they can be largely eliminated.

Accidents in coal mines are the most common of the mining accidents. The record of coal mine accidents in the United States is unsatisfactory because it consists merely of a collection of the reports of state mine inspectors whose work is not so careful as that of federal officials. However, it was shown that in a single year (1908) 2500 miners were killed and 6500 injured. From a comprehensive study of all the statistics available, it is fair to conclude that there has been a steady increase from year to year, not only in the actual, but also in the proportional, number of men killed in mining accidents. This increase cannot be accounted for merely by the growth of the mining industry. A recent bulletin on coal mine accidents dealing with conditions abroad before the World War proves this conclusively. It states: "In all the European coal-producing countries the output of coal has increased greatly during the last ten years, but the number of deaths per one thousand miners, instead of increasing as in this country, has undergone a marked and decided decrease. This decrease has been due to the effect of mining legislation in those countries for the safeguarding and protection of the lives of the workmen, and has been made possible by government action in establishing testing stations for the study of problems relative to safety in mining, including the use of explosives."

The success of foreign governments in preventing mining accidents has been due primarily to their rules concerning the use of safety lamps and to their regulation of the character and use of mine explosives. Nothing could be more elementary or simple, and yet the United States has made but little effort to meet the problem in this way. It should be remembered, however, that the problem here, by reason of the dual character of our governmental system, is more complicated than the situation abroad.

Turning now to accidents in manufacturing, we find that, because of lack of uniformity in the work of state factory inspectors, it is impossible to determine accurately the total number of such accidents. How- *Other accidents.*

ever, the best statistics of factory accidents have been compiled from the reports of the New York Bureau of Labor Statistics. If we take five typical years at the opening of the present century, we find that, in that state, 39,244 such accidents were reported. Of this number, 864 were fatal; 6580 involved permanent disability; and 32,722, temporary disability. The accidents in building trades have never been recorded except in fragmentary form. It is therefore impossible to state anything definite regarding them. The only accurate information that can be secured comes from the unions which pay benefits. The accident features of these unions furnish material from which may be made an estimate of the number of union men killed and injured in each trade.

It is clear, however, from a study of all the available sources of information, that the total loss to the community, caused by accidents of one kind or another, is enormous. An estimate of this loss places the total number of men, women, and children

**Total
annual
number.**

killed and injured each year through industrial accidents at five hundred thousand. This figure is as nearly accurate as possible, for it has been arrived at by five different methods of computation.

It is not true, as it is currently supposed, that these accidents happen only to the careless, unskilled laborer, the immigrant, and the American of low stand-
The labor affected. ard. Not only is the semi-skilled trainman a victim of the railroad accident, but also the conductor and the skilled engineer. A Pittsburgh investigation shows that of 440 men killed only forty per cent were lowest grade workmen. Thus the social cost of accidents is intensified by the fact that efficient as well as inefficient workmen are victimized.

The burden of accidents falls on the family and on the community. The accident destroys the worker. The
Effects of accidents. worker is the mainstay of the family, which is itself the basis of the community. Although children and old people may escape industrial accidents, the breadwinners upon whom they depend for subsistence are struck down at the rate of a half million every year. Industrial accidents, therefore, constitute one of the causes of industrial inefficiency. Of the half million persons annually killed and injured, the majority are wage-earners with families depending upon them. Their death or injury, therefore, affects the efficiency of the coming generation.

Dangerous Trades. — Another danger to which labor is subjected results from the nature of the occupation. While, fortunately, not numerous, certain trades do exist where the death rate is several times higher than the death rate in the community at large. When a workingman

enters such a trade and accepts such work, he takes his own life in his hands.

The chief source of danger in these occupations arises from the presence of dust, which, entering the system through the lungs or alimentary canal, proves injurious to the worker. Dust may also irritate the skin, but its effects here, except in the cases of antimony smelters and arsenic grinders, are usually not serious. In cases where dust enters the alimentary canal, stomach and intestinal troubles result; when it enters the lungs, tuberculosis develops.

Thomas Oliver, in his *Dangerous Trades*, says, "Were it not for dust, fumes, or gas, there would be little or no disease due to occupation, except such as might be caused by infection, the breathing of air poisoned by the emanations of fellow-workmen, and exposure to cold after working in overheated rooms." Dust, then, is the most prevalent source of danger; and its most injurious effect is on the lungs.

The normal lung is a light, spongy mass, interwoven with minute bronchial tubes. Nature planned to exclude foreign substances from these tubes by placing hair in the nose and by guarding the whole passageway with the vocal cords and the cartilage plates. These devices prevent any ordinary amount of dust from reaching the lungs. But, in coal mines, there is more than an ordinary amount. A visitor, long after leaving a breaker in which coal is cleaned dry, will continue to expectorate dust or coal particles which have been arrested in the larger passages. A long exposure to dust, however, dulls the sensibility of the membranes; efforts are no longer made to expectorate the dust, and the particles

Chief source
of danger.

Danger from
coal dust:

Character of
the lungs.

enter the small tubes of the lungs and become embedded in the lung tissue.

Again, Thomas Oliver says, "In a coal miner's lung there can be observed small masses of cells, deeply laden with carbon particles surrounded by a hardened zone of altered lung, numerous black streaks underneath the pleura or covering of the lungs, inklike dots in the walls of the small bronchi, and enlargement with pigmentation of the bronchial glands." The entrance of dust into the lung finally converts it into "a hard and almost solid organ, incapable of carrying on the work of respiration."

A similar effect is produced by other forms of dust. Examinations show particles of grit embodied in the tissue corresponding exactly to the dust grit of the trade in which the victim worked. Therefore, the man who goes to work in a dusty trade prepares his lungs for a cordial reception to tuberculosis, or any other bacteria which attack weakened lung tissue. However, much can be done in the way of precaution and prevention. By screening the coal wet, the dust in the coal breaker may be reduced; and, by the use of suction wheels, blowers, and other mechanical devices, the dust in the factories may be rendered less dangerous.

There are other occupations besides mining that are full of risk and danger. Certain substances used in industry are always injurious to life and health. Among these substances none is more widely used, nor more really dangerous, than lead in its various forms. Lead poisoning occurs in several trades, although it is most severely felt in the manufacture of white lead. Poisoning from lead may be acute or chronic.

Effect on the lungs.
How preventable.
Danger from lead poisoning:
Its effects.

The symptoms of both forms are colic, "wrist drop," loose teeth, and blue lines on the gums.

Ventilation, an abundance of nutritious food, abstinence from all excess, especially alcoholic, the use of special helmets, together with short hours in the factory, *How preventable.* all assist in decreasing the dangers from lead poisoning. There is no other industry in which the dangers are more acute, and where the necessity for precaution and preventive measures should be more emphasized.

The production of phosphorus, mercury, and arsenic; the chemical trades; rag sorting; wool sorting; work in compressed air chambers, — all involve dangers of varying degree. The reference to mining and the lead industry will, however, suffice to indicate the character of dangerous trades, their effects, and the possibility of remedying them through wise preventive measures. *Other dangerous trades.*

The recent progress made by the United States in the direction of social legislation is attested by the act of Congress which, in 1913, prohibited the use of poisonous phosphorus in the manufacture of matches. *Recent progress.* The awakening of the public conscience was so general that, within three years, twenty-three states passed accident insurance laws or workmen's compensation acts. The act of Congress prohibiting the use of poisonous phosphorus in the manufacture of matches resulted in fifteen states adopting the bill of the American Association for Labor Legislation for protecting workers from several occupational diseases, and from lead poisoning in particular. Foremost among the general measures designed to relieve the distress caused by industrial accidents and dangerous trades is the Workmen's Compensation Act. This measure

is intended to furnish the injured worker automatically with the compensation specified in the act, and thus relieve him of the necessity of legal procedure with all the costs included in such action. Likewise, accident insurance and old age pension acts are coming to play an important part in our solution of this problem. In 1908 Congress enacted a law providing a system of compensation for accidents suffered by industrial employees of the Federal government. The example set by the national government was followed by the state governments, so that by 1914 a majority of the state legislatures had enacted laws providing compensation for industrial accidents.

QUESTIONS FOR RECITATION

1. Define industrial accidents; dangerous trades.
2. Classify the chief industrial accidents in the order of their importance.
3. Which group is best studied? Why? Why cannot the other groups be so effectively investigated?
4. Discuss the causes and remedies of railroad accidents.
5. Compare mining accidents at home and abroad. How may they be lessened?
6. Give an estimate of the total annual number of accidents in the United States.
7. Who suffer most from accidents?
8. Name the chief dangerous trades and tell why each is dangerous.
9. Why is dust so dangerous?
10. In regard to mining:
 - a. Explain its dangerous consequences.
 - b. Discuss the remedies.
11. Discuss lead poisoning:
 - a. How it affects the system.
 - b. How it may be obviated.
12. Name some other dangerous trades.

13. Why has the United States abolished the use of poisonous phosphorus in match making?

14. Describe the recent progress made in social legislation in the United States.

PROBLEMS FOR DISCUSSION

1. Are industrial accidents inevitable?

2. In a case where persons are killed and injured in a wreck due primarily to a defective air brake, what should be the legal remedy?

3. To what extent is the community at large responsible for accidents?

4. Where does the ultimate burden of industrial accidents rest? Explain.

5. Should a manufacturer be held personally responsible for an accident due to unguarded machinery?

6. What would be the most effective method of preventing accidents?

7. Discuss workmen's compensation acts as remedies.

8. Analyze the street accidents of your city, and develop a means of prevention.

9. Discuss the dangerous trades in your community.

10. Why is lead poisoning particularly disastrous?

11. What remedies exist for the dangers involved in dangerous trades?

12. Are consumers justified in using the products of such trades? State reasons.

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CHAPTER XVII

PROBLEMS OF INDUSTRY

- I. Child labor
 - 1. Its English origin
 - 2. Its extent in America
 - 3. Its evil effects :
 - a. On the child :
 - (1) Physically
 - (2) Mentally
 - (3) Morally
 - b. On family life
 - c. On society
 - d. On the product
 - 4. Its regulation
- II. Women in industry
 - 1. The causes :
 - a. Minute subdivision of labor
 - b. Acceptance of lower wages
 - c. Loss of home employment
 - 2. Arguments against
 - 3. Arguments in favor of
 - 4. Regulation of the problem
- III. Unemployment
 - 1. Causes :
 - a. Personal causes
 - b. Industrial causes
 - 2. Effects :
 - a. On the unemployed
 - b. On the family
 - 3. The remedy

Of the problems arising from modern industry, three are of recurring interest. These are the problems of child labor, women in industry, and unemployment.

Child Labor. — The problem of child labor had its real origin in England in the last half of the eighteenth century when the factory system was first being developed. Manufacturers were in great need of ^{its English} unskilled labor to operate the new machinery, while poor-houses and orphan asylums were overcrowded with just this kind of labor. As a result, these institutions gave up their children to the manufacturers, who in certain cases even agreed to take one insane child with every twenty healthy ones. The children were quartered in barracks and worked in day and night shifts, the day shifts sleeping in the beds left vacant by the night workers. No provision was made for sanitation, and the children were fed on the worst kind of food. These conditions, culminating in an outbreak of disease and epidemics, resulted at the opening of the nineteenth century in the passage of an act for the regulation of the health and morals of apprentices. Then, in 1833, and later in 1847, much more comprehensive and effective laws regulating the labor of women and children in industry were passed. In our own day the English government has completed its supervision over industry and has passed much important social legislation.

Child labor in the United States is thus a recurrence of an Old World phenomenon. At first, it appeared in New England, where industry was early developed, ^{its extent} but since the close of the Civil War, the South ^{in America.} has entered upon an era of industrial development, and thus the old problem of child labor reappears there to-day.

Again, in the industrial sections of the Middle West, and in the great agricultural West, thousands of children under fourteen years of age are engaged in industrial and agricultural work. A few years ago it was estimated that of the two million children employed in gainful occupations, three-fifths of them were engaged in agriculture, one-sixth in manufacturing, one-sixth in domestic work, and the remainder in commercial and professional service. The largest number of children are, therefore, employed in agriculture; but child labor is usually associated with manufacturing, for it is here that its worst evils are manifested.

There is no doubt about the evil consequences of employing children in industry. From whatever stand-

Effects: point the problem is regarded, child labor is injurious. It is harmful to the child, to family life, to society, and to the industrial product.

On the child. On the physical side, hard labor is injurious to young children because their bodies are still developing. Through activity the body of the growing child is developed most surely and most completely. The originalities of a child arise through action, struggle, and the trial of things for himself. But the child of twelve or fourteen who stands at the machine tying threads for eleven hours a day is not growing through expression. He is being narrowed by an unvarying, monotonous impression. He is losing the opportunity for the spontaneous expression of the new life that comes only through play.

From a mental standpoint, child labor is a process of mind-stunting. First, the child is removed from the possibility of an education. He is taken from the school and placed in the factory, where he no longer has an

opportunity to learn. Then he is subjected to monotonous toil for long hours, until his mind is dwarfed into the familiar form of the unskilled workman.

The moral effects of child labor are also bad. Entering the workroom with adults of all types of morality and immorality, the child ceases to be a child in matters of worldly knowledge, while he is still a child in ideas. There is no home influence or school influence to ward off the dangers; no mother or teacher to point out the hidden rocks.

The effects of child labor on family life are obvious. In many localities in the South, where industry is developing for the first time, the children work in the mill with their parents. If either parent stays home, it is frequently the father. Under these *Effect on family life.* circumstances, the mother has no opportunity at home to maintain family standards. Neither in their parents, nor in their homes, do the working children see those qualities which make the home the ideal of human happiness.

It is equally clear that child labor injures society. By making of the boy an unskilled worker incapable of earning large wages, and by making of the girl a woman *Effect on society.* incapable of becoming a strong, normal mother, child labor inevitably tends to undermine social life. Because the boy is forced into the world too early in life and made to face its responsibilities, child labor promotes delinquency. The inmates of houses of correction were usually working boys when they were first arrested. The schoolboy is almost a negligible factor there. Both family and individual life are distorted by child labor.

Finally, child labor affects the product of industry.

The treasurer of the Alabama City Cotton Mill wrote to his agent: "Every time I visit this mill, I am impressed with the fact that it is a great mistake to employ small help in the spinning room. Not only is it wrong from a humanitarian standpoint, but it entails an absolute loss to the mill." Child labor is thus wasteful to industry. Manufacturers everywhere are being forced to this viewpoint. Child labor is undoubtedly cheap labor, but the product is cheaper than the labor involved in its creation.

Consequently, from every standpoint, child labor is undesirable. It decreases individual and social welfare and lowers the standards of the future citizen, as well as the industrial standards of society. In view of these disastrous effects, numerous laws have been passed which aim to exclude from work children under fourteen, and to safeguard the working lives of children from fourteen to sixteen years of age. In recent years the public conscience has been so aroused in this direction that, in one year alone (1913), thirty-one states enacted legislation directly bearing upon child labor; and the national government itself established a Federal Bureau of Child Labor.

Women in Industry. — Another problem of growing importance is that of women in industry. A half century ago women played an insignificant rôle in industrial life; to-day there is not an important branch of industry where she is not found. The World War, by withdrawing millions of men from industry, resulted in the entrance of millions of women into the places made vacant by the exigencies of war. But, even in normal times, women are assured a place in industry, because that place

*Effect on
the product.*

*Regulation
of child
labor.*

Causes:

has already been established in modern industrial life. War merely served to accentuate the importance of women as workers.

The causes of this advent of women into industry are obvious. First of all, the minute subdivision of labor has given rise to such a degree of specialization in industry that there are innumerable small operations that women can easily perform. For example, a girl may paste corners on paper boxes, or stamp out pieces of paper to make Christmas cards. Without previous training, she will, in a short time, learn to manage a machine. At first her efficiency will not be high, but she will earn at least enough to assure her future independence.

*Minute
subdivision
of labor.*

Women, having only themselves to support, are willing to accept a much lower wage than men. Therefore, when they enter industries in competition with men, the latter are frequently forced out altogether. For example, men formerly rolled cigars for a wage sufficient to support themselves and their families. Now the same labor is performed by girls at a much lower rate.

*Lower
wages.*

The most potent cause of woman's entering industry, however, is found in her loss of home employment. Formerly, women had so much to do at home that their time was fully occupied. Spinning, weaving, the manufacture of clothing, and the preparation of foodstuffs, all engaged their attention. But the seat of these operations has now been removed to the factory. Comparatively little sewing is now done in the home, and the cooking is decreasing rapidly. Cleaning is the only part of "woman's sphere" left her; it is small wonder, then, that she goes to the factory to escape this drudgery.

*Loss of
home em-
ployment.*

As to the advisability of woman's entering industry opinion is divided. Those who are opposed to this tendency point out that the chief function of woman is to be a home maker and to bring up her children properly; that this work still engages enough of her time to prevent her from undertaking outside employment; that factory labor injures women, and through them, their offspring; and that, finally, the presence of women in industry cuts down the wages of men.

On the other hand, those who are in favor of this tendency make the following arguments: (1) that, because of the development of the factory system, there is comparatively little left for women to do at home; (2) that, because skill and dexterity are chiefly required, labor is not injurious to women physically; (3) that, by entering industry, women are made independent and equal to men so that they need not be forced into unhappy marriages; and (4) that it is not fair to force upon woman the drudgery of cleaning and cooking which constitute so large a part of the regular work of the household.

However, no matter how divided opinion may be regarding the advisability of women entering industry, there can be little doubt concerning the necessity of regulating their labor. Woman, like every new element in industry, is easily susceptible of exploitation at the hands of the unscrupulous employer. Her necessity, her willingness, and her first contact with the problem, all combine to necessitate some form of protection. As a result, the states have passed numerous laws restricting the hours of labor, the conditions of working, and the night work of women in industry. The problem, too, is more easily handled than that of the labor

of men, because the courts are not handicapped to the same extent in dealing with women, as they are with men, by the right of "freedom of contract."

Unemployment. — The problem of the unemployed varies in importance with changing industrial conditions. In times of great prosperity or national exigency, when labor is in great demand, little attention is paid to this problem; but, when the industrial or military necessity has passed, the army of the unemployed again assumes large proportions.

Unemployment may be due to personal causes, such as malnutrition, sickness, and accidents; or to industrial causes, such as industrial crises, labor troubles, and seasonal and casual trades. That mal-
Causes:
Personal
causes.nutrition is a very real cause of unemployment was well illustrated by an experiment made in England. An unemployed farm colony was started, and the unemployed from London were set to work on the land. During the first few weeks many of the men were so weak from lack of food as to be unable to do more than two or three hours' work a day, and that of the poorest sort. After being maintained for several weeks on good food, these same men were doing effective work. Just how extensive is the unemployment caused by sickness and accidents we have no accurate means of knowing. That sickness and accidents exist is certain, and that they cause unemployment is obvious; but, thus far, the lack of organized material on the subject will not permit more than a passing reference to them as factors in the problem.

The industrial causes of unemployment may be grouped under the head of seasonal trades, industrial crises, labor troubles, and casual trades. Seasonal trades are common,

and they inevitably mean unemployment. For example, outside construction work offers employment only at certain seasons of the year. The effects of industrial crises and labor troubles upon unemployment are also apparent. A chart of the coal industry shows that work is very slack whenever an industrial crisis occurs. For example, in 1902, because of the great coal strike of that year, the anthracite mines were worked only one hundred and sixteen days, — about thirty-eight per cent of the total number of possible working days. A very frequent cause of unemployment exists in certain trades known as casual trades, — those requiring labor a day here or a week there, but never regularly or systematically.

The effects of unemployment are twofold. In the first place, the unemployed himself is affected. Idleness leads to trouble and lawlessness. Perhaps, too, the unemployed, in his attempt to secure work, may use freight trains as a means of getting from place to place. This happy-go-lucky life, once tasted, proves too attractive; and the laborer, freed from all restraining influences, soon becomes a confirmed “tramp.” If he is a skilled laborer, the unemployed will lose his “knack” of work; if unskilled, his physical strength. In any event, this idleness will be a drain upon his resources and cause his efficiency to be lowered. But the effects of unemployment do not cease with the unemployed. They extend to his family. The irregular life of the father communicates itself to the children; and the lack of food, resulting from a lack of income, means malnutrition for the whole family group. Thus the standard of social efficiency is lowered.

Effects of
unemploy-
ment.

To palliate the evils of unemployment some relief, so far as the personal causes are concerned, may be found in sickness, accident, and old-age insurance. This policy has been pursued in many European countries, and has lately been followed by our own state governments. Along with the general movement for improving the social condition of the worker in regard to hours of labor, conditions of work, and the means of safeguarding the health and life of the worker, the policy of protecting the workingman through sickness and accident insurance has steadily gained ground. But the most positive means of solving the problem of unemployment is to strike at its causes. If industrial stability can be secured, unemployment will cease to exist. This stability can be attained only by a comprehensive government policy that is planned to meet future needs and possibilities. For example, public construction works should be so planned that work upon them may be done in times when labor is plentiful and employment difficult to secure. There should also be a national system of labor exchanges, whereby an oversupply of labor in one section may be utilized in another district where there is a shortage of labor. Again, seasonal occupations should be properly dovetailed so that there is no need for temporary idleness. All this can be accomplished only by interstate and national activities planned with great foresight on an extensive scale.

QUESTIONS FOR RECITATION

1. Is child labor a new problem? Why not?
2. Where, and in what occupations, is child labor found in the United States?
3. Discuss the evils of child labor.

4. Where is child labor most harmful? Why?
5. What is the remedy for child labor?
6. What has your state done in regard to child labor?
7. Why are women entering industry?
8. What can be said in favor of this movement?
9. What reasons are advanced against women working?
10. Why should legislation be passed to protect working women?
11. Is unemployment an important problem at present? If not, why should we consider it?
12. What gives rise to unemployment, — individually? Socially?
13. What is the effect of unemployment on industrial efficiency? On social welfare?
14. How may the evils of unemployment be remedied, (1) negatively? (2) Positively?

PROBLEMS FOR DISCUSSION

1. Discuss the causes of child labor.
2. Is child labor necessary to the production of captains of industry?
3. What is the effect on children of keeping them away from work until they are sixteen? Until they receive a college training?
4. Who is the chief gainer from child labor? Who is the chief loser?
5. Are parents responsible for child labor?
6. To what extent are the children themselves responsible?
7. Is it justifiable for women to enter industry?
8. Would you permit your wife or daughter to take up a gainful occupation?
9. Is the frequently made statement — "woman's place is in the home" — true? Defend your position.
10. Is unemployment necessary? Explain your answer.
11. What is the English system of labor exchanges?
12. On what grounds should society seek to prevent unemployment?
13. Is there any "right to work"?
14. Should the government guarantee work at all?

15. On what ground can you justify governmental action in any of these problems?
16. What has the national government done in these matters?
17. What must the government still accomplish in this direction?

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CHAPTER XVIII

SOCIAL AND INDUSTRIAL EDUCATION

- I. Educational ideals
 1. In ancient times
 2. In the Middle Ages
 3. In modern times :
 - a. The new ideal
 - b. The changed conditions :
 - (1) How met by higher education
 - (2) How met by secondary education
- II. Uniformity in elementary education
 1. Extent of uniformity
 2. The consequences :
 - a. "School mortality"
 - b. Illiteracy
 - c. Child labor
 - d. Lack of preparation for life
 3. The remedy — differentiation :
 - a. For boys and girls
 - b. For city and country
 - c. For head workers and hand workers
 - d. For different trades
 4. The outlook

Educational Ideals. — Education is the most potent factor in the promotion of social welfare and in the development of industrial efficiency. It is the motive force of civilized society. While it has existed in some form or other from time immemorial, its ideals have gradually changed from one historic period to another.

Among the ancient peoples of the East, where the religious ideal predominated, education was confined to the priestly caste and consisted largely of the memorization of sacred texts. The Greeks were the first to emphasize the liberal ideal in education and to give to the individual the opportunity for self-development untrammelled by religious traditions. Men have never ceased to marvel at their intellectual and artistic attainments; nor yet to imitate them. This process of imitation was first begun by the Romans, who, however, became more practical and legalistic in their own development.

With the establishment of Christianity throughout Europe, the religious ideal again dominated the spirit of education in the Middle Ages. While the old learning and the rare manuscripts were preserved in the monasteries, the liberal spirit itself was displaced by one of religious asceticism. With the Renaissance, however, the liberalizing and individualistic spirit appeared once more. After centuries of inertia, freedom of inquiry was again stimulated and men reached out for the long lost culture of the past. At the same time, the spirit of inquiry penetrated into science and the world of life. As this period drew to a close, men were peering everywhere into all fields of human knowledge and, in addition, had restored the old culture of the Greeks and Romans to a dominating position in civilized society.

The "classics" continued to hold this dominating position in our educational system until our own generation. To-day, however, we are gradually witnessing the growth of a new ideal in education. It is the ideal of social welfare brought about by individual efficiency. No longer is education regarded as

*In the
Middle
Ages.*

*In modern
times: The
new ideal.*

the privilege of the few; no longer is it monopolized by culture. Its aim is not merely to equip a small group of men with the highest culture of the past. It still performs this function; but, in addition, it aims to furnish the masses with the means of promoting their welfare and efficiency. This new ideal is not aristocratic, but democratic; not merely cultural, but useful; not purely individual, but largely social.

This change in the educational ideal has been necessitated by the conditions of modern life. Since the great

*The
changed
conditions.*

Industrial Revolution of the eighteenth century, the civilized world has become increasingly industrial and social in all its relationships. Man's interests are no longer confined to any one type of culture. Because of the tremendous changes of the nineteenth and twentieth centuries in economic and social matters, the old learning fails utterly to equip man with the kind of knowledge necessary to solve the problems arising from the development of modern science, from the growth of industry, and from the spirit of coöperation. The new learning, therefore, emphasizes the importance of practical science, of industrial knowledge, of sociological information, and of vocational and professional training.

The institutions of higher learning have been the first in America to make an attempt to meet these changed conditions. Realizing that education in its truest sense is preparation for the work of life, these institutions have incorporated into their curricula courses which have a direct bearing upon the life of the individual. Schools of engineering, of commerce and industry, of agriculture, of architecture, and of like character, are all striking examples of this new readjustment.

This tendency to prepare individuals for practical life so that they may be given the basis of complete living may be observed also in secondary education. In addition to the classical high school, we now have, in most of our large cities, high schools with manual training, commercial, and vocational courses. It is true that much remains to be accomplished in the direction of socializing secondary education; but too much credit cannot be given to the pioneers in this movement, who, seeing the evolution of modern life, have attempted to make the educational system conform to its needs. Of the socializing movement in education, Edward T. Devine says, "Its end is practical, being the utilization of whatever is usable in that which the student gets from history and literature and science, from disciplinary studies and from cultural studies, to enrich his civic life, to insure his becoming a contributor to social welfare instead of its debtor, to make him less a parasite and more a creator of social values."

Uniformity in Elementary Education. — It is in primary education that this tendency is last to appear. The course of instruction given the child in the elementary school is, in many cities, still largely traditional and generally uniform. While it is true that, here and there, experiments and innovations are being introduced, the underlying principle still remains the same. The primary school is but a ladder to the high school; the high school leads to the college. There has been little attempt to make elementary instruction fit the child's individual needs and to provide for his future place in the social system.

While it is true that this uniformity results in an equality of equipment for those completing the first years of school

life, it is nevertheless disastrous to those who do not survive the rigidity of the work. Since the prescribed course is distasteful, the beginner drops out of the race before it is fairly begun. Striking evidence of this fact is found in the high percentage of elementary "school mortality." This mortality increases as the grades advance and would be appalling were it not for compulsory education laws.

The extent of illiteracy in the United States is not generally realized. Its prevalence, however, is proved by census investigations and by the records of the World War, which revealed the presence of 7,000,000 adult illiterates in the United States. A census bulletin tells us that somewhat more than one-tenth (106 per 1000) of the population at least ten years of age is illiterate. The importance of this statement becomes particularly significant when a comparison is made between illiteracy in the United States and in European countries before the World War. Of every thousand inhabitants in Germany, Norway, and Sweden, one was illiterate; in Switzerland, three; in Denmark, five; in Finland, sixteen; in France, forty-nine; and in England, fifty-eight.

Another consequence of the school's inability to hold children because of its uniform curriculum is found in the existence of child labor. "The most potent reason, in my opinion, why children are in the factory is our school system." This statement by a factory inspector of Louisiana voices the opinion of many social workers who point to the school as a frequent cause of child labor. There is little doubt that many children prefer the work of the factory to that of the school.

Finally, the effect of uniformity in elementary education extends to a lack of preparation for life. Children leave school and go to work because the school system fails to prepare its pupils for the life of the world. Seven-eighths of the school children of the United States never enter the high school. "Yet," said a critic of our educational system, "one who goes out of the school system before the end, or at the end, of the elementary course, is not only unprepared for any vocation which will be open to him, but too commonly he is without that intellectual training which should make him eager for opportunity and incite him to the utmost effort to do just as well as he can whatever may open to him."

*Lack of
preparation
for life.*

What, then, should be done to make the school system more attractive and of greater service to the average boy and girl? This question is not difficult to answer. The work of the school should be differentiated according to the needs of the individual and of the community. Different training should be provided for girls and boys, for city children and country children, for head workers and hand workers, and for workers in different trades. Life is so varied that no one training is suited to all.

*The remedy
— differentiation:*

In the first place, there is no doubt that sex should play a part in determining the character of education. While it is true that during certain periods of life several millions of women are engaged in industrial pursuits, woman, nevertheless, is primarily engaged in the home. Just as the great majority of boys will grow up to use their hands, so the great majority of girls will grow up to be wives and mothers. It is perfectly evident, therefore, that elementary instruction should provide one kind

*For boys
and girls.*

of training for home makers, and another kind for bread-winners. A system of education which fails to recognize this principle is altogether inadequate to meet the needs of modern life.

Likewise, another differentiation is equally fundamental. The training of boys and girls in the city should differ *For city and country.* essentially from the training of country boys and girls. Education, primary as well as secondary, should bear a direct relation to the adult life of the child. City conditions are so totally different from country conditions that each set of conditions demands a training peculiar to itself. Industry is the keynote of city life and agriculture the basis of country life. Therefore, the training of city people should be largely industrial and commercial, while that of country folk should be chiefly agricultural.

It is equally obvious that in the city different training should be provided for head workers and hand workers. *For head workers and hand workers.* In general, the elementary curriculum in the past has made provision simply for head workers. But perhaps three-fourths or seven-eighths of all the boys and girls who go through city schools will be called upon to do work with their hands. An education which prepares for industrial efficiency will, therefore, make provision in the earliest grades for training in some form of hand work.

The disappearance of apprenticeship from modern life has necessarily widened the scope of industrial training *For different trades.* in our public school system. Save in a few trades, such as plumbing, the old apprentice form of training has passed away. As a result, a new duty has been imposed upon the school, and, in many

large cities, we find educational authorities gradually recognizing this obligation.

If this differentiation in training along the lines just indicated is carried out, the elementary school, by losing its uniformity, will be brought into closer harmony with the conditions of modern life. A happy **The outlook.**

augury for the future is found in the fact that, in many of our larger cities, attempts are being made to bring about this closer relation between the work of the school and the work of life. For example, the introduction of sewing and cooking, the provision for elementary manual training, the introduction of the "Gary System," the establishment of trade schools for boys and girls, the junior high school movement, and the organization of vocational courses are all hopeful indications of a recognition of this principle. Preparation for life, which is the ideal of the newer education, will ultimately shape the work of the elementary schools, as it is molding that of the high school and the university.

QUESTIONS FOR RECITATION

1. Discuss the early ideals of education.
2. Show the conditions that gave rise to these ideals.
3. Do these ideals persist in education to-day? Are they universally accepted in America?
4. What is the new educational ideal? Is it universally accepted?
5. Explain clearly how this new ideal has arisen. In your opinion, is it final or ultimate?
6. Why do educational ideals change?
7. What kinds of knowledge does the modern educational ideal emphasize? Why?
8. How is the new ideal reflected in our universities?
9. How has the public high school met the conditions of modern life? What is yet to be done in this direction?

10. What is a distinguishing feature of elementary instruction in American public schools?

11. What modifications of the uniform curriculum are necessary to bring about a better industrial and social training in the elementary school? Explain the necessity for each.

12. What are the disadvantages of the uniform curriculum of the elementary school? Explain each.

13. Is America progressing in the right direction in shaping her public educational system? What reasons have you for so thinking?

PROBLEMS FOR DISCUSSION

1. What should be the purpose of education?

2. Should there be definite connection between school life and life in the world? Why?

3. What does the school in your community do to prepare boys for the work of life?

4. What life preparation does the school furnish for girls?

5. Should some form of manual training be introduced in all grades between the kindergarten and the high school? How could this be done? Is the same true of commercial training?

6. Should the public school include domestic science training for girls? Why?

7. Is universal education desirable? Explain your answer.

8. What advantages or disadvantages would accrue to the country if free education were abolished?

9. Would it be wise to make it possible for everybody to secure a college education? Why?

10. What has the college done to prepare men and women to meet the work of life?

11. What is the economic basis of education? The social basis?

12. What difference is there between public and private schools in regard to educational policy and ideals?

13. Discuss the work of Herbert Spencer in education.

14. What right has the student of economics to be interested in education?

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CHAPTER XIX

THE NATURE OF CAPITAL

I. Character of capital

1. Its importance :
 - a. In primitive times
 - b. In modern times
 - c. In capitalistic production
2. Examples and definition of capital
3. Wealth may be consumed :
 - a. Unproductively
 - b. Productively
 - c. The final consequence :
 - (1) The diagram
 - (2) The effect of war

II. Money and capital

1. Is money capital?
 - a. When it is
 - b. When it is not
2. The newer viewpoint :
 - a. Its advantage
 - b. Its disadvantage
3. Capital goods and money capital
4. The conclusion

Character of Capital. — Land, or natural resources, and labor, or human energy, are spoken of as primary essentials in production because both must be present at all times in every productive operation. The fish in the stream, and the coal on the mountain side, cannot be converted into wealth, if there are no people to catch the one, or to pick up the other.

Its importance: In primitive times.

In the same way, if there are no fish to catch and if there is no coal to mine, labor will be helpless and unable to produce wealth. There is, however, still another factor in production. While land and labor are the primary essentials in any productive operation, there is a secondary essential, — capital. Capital is spoken of as secondary because it is the result of the application of labor to natural resources. If all the capital in a community were destroyed, it could be replaced by the application of labor to land. In primitive times little, if any, capital really existed. What capital we now have, therefore, is the result of man's utilization of natural resources; it is the offspring of land and labor.

Modern industry, however, requires the presence of all three factors. To-day, capital is as essential to production as land or labor. It is impossible to picture a present-day productive enterprise *In modern times.* being carried on without the aid of capital. The old primitive methods have gone forever. The spectacle of a savage catching fish from the brook with his hands, *i.e.* without capital, has no modern counterpart. Hooks and nets, the products of past industry created by application of labor to land, have now become as essential to fishing as the fish and the man himself. Therefore, to catch fish, *i.e.* to produce wealth by creating utilities in the fish, capital is required.

Thus, modern production is distinctly capitalistic production. By this we mean that man has inextricably introduced into production a third factor, which *In capitalistic production.* has become co-equal in importance with land and labor. This capitalistic production has changed the old direct relationship that existed, in primitive

times, between man and nature. Instead of being simple and direct, production now becomes complex and indirect. In fact, capitalistic production is exceedingly roundabout, and becomes still more so with every advancing step of civilization. With the age of inventions and the development of machinery, the process of production has become so complicated and the importance of capital so tremendous that civilization itself is spoken of as being in the capitalistic stage of development. The new factor at times almost overshadows the original elements; the child almost dominates the parents. Instead of depending upon primitive implements and crude tools, production now depends upon huge plants and factories equipped with costly machinery and other highly specialized products of past industry.

There are a thousand ways in which the products of past industry aid man in producing wealth, and every such instrument constitutes a form of capital. Under this term we may include: (1) improvements on land; (2) roads, railroads, telegraph and telephone lines; (3) tools, machines, and mechanical appliances; and (4) raw materials to be used in later manufacturing. All these constitute wealth, and all help man to produce additional wealth. Capital, therefore, may be said to be that part of wealth used to produce more wealth. It is the "tools" of production.

All wealth is not capital. The test whether or not wealth is capital is the way in which it is used. If a nation or an individual has wealth and consumes it unproductively, then this wealth is not capital. The man who dissipates a fortune prevents the employment of so much wealth as capital. The Pyramids of Egypt, although representing a vast

**Examples
and
definition
of capital.**

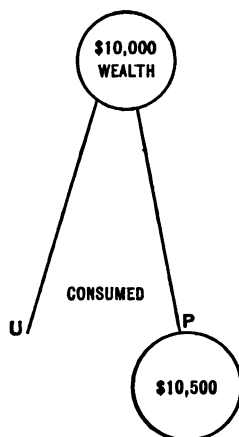
**Wealth
consumed:
Unproduc-
tively.**

outlay of materials and labor, are not capital. Wealth used unproductively, whether by man or by society, is not capital.

Wealth may, however, be consumed productively. The wealth represented by railroads, machinery, and buildings is capital because it is being used to produce more wealth. Capital, therefore, depends upon the productive use of wealth. A man with a fortune, instead of squandering it, may invest it in a business and thus convert it into capital. A nation with great natural resources may so direct its energies as to produce vast quantities of goods to be used in future production.

Every individual possessed of wealth has, therefore, two choices open to him. He may use it productively or unproductively. If, through waste, luxury, and extravagance, man uses his wealth unproductively, he not only destroys his own wealth, but also decreases the productive forces of the community. On the other hand if, by enlarging his plant and installing new machinery, he uses his wealth productively, he not only keeps his original wealth but adds to it through production.

This principle may be illustrated by the accompanying diagram. When \$10,000 worth of wealth is consumed along the line *U*, that is, unproductively, it becomes completely dissipated. The individual, himself, loses it and its consumption, let us say, in the form of extravagant banqueting



and entertaining, results in lowering the efficiency of the productive forces of society. When, however, this same wealth is consumed along the line *P*, its consumption results in the production of \$500 more wealth and the original \$10,000, which is now capital, remains in industry. If, instead of consuming wealth in the form of extravagant and luxurious living, man invests his wealth in government bonds, in bank holdings, or in some other form of productive enterprise, he ceases to be a spendthrift and becomes thereby a capitalist.

In this connection it is well to contemplate the effect of war upon capital. Nations, like individuals, may recklessly waste the wealth of society. When, like Germany before the World War, they are consciously organized for the promotion of war and conquest, they are known as militant societies, as distinguished from industrial societies, where the governmental organization is directed toward the production of national wealth and the promotion of social welfare. The United States has always been organized politically along the line of industrial development. As a result, the accumulations of capital in this country are greater than in any other single nation in the world. On the continent of Europe, war has resulted in the destruction of billions of dollars' worth of wealth and capital. If it were possible to abolish war, all this unproductive consumption of wealth would be eliminated. If this is not possible, a nation's war machinery should be made secondary to its industrial life. In this manner, fleets and armies become a protective agency for the development of industry and national life. This is the American policy.

Money and Capital. — One of the first questions that arises in a discussion of capital is the query, "Is money

capital? ” Money is a product of past industry and is used to assist in production. In order to prepare it for circulation, the mint, equipped with expensive capital, has expended labor in turning the bullion into its present form. Furthermore, money is an absolute necessity in productive operations. The grocer needs money to make change; the manufacturer needs it to pay his employees on Saturday night; the consumer needs it to purchase bread from the baker and milk from the dairy. In other words, money performs a very essential part in aiding modern production. If money, then, is the product of past industry and performs a part in production, it must be capital.

But these arguments do not apply to all money. If a man should receive fifty dollars and should put them in a stocking behind the chimney, this money would not be capital because it would not be assisting in production. It is, therefore, fair to conclude that, as with other commodities, money may be capital or it may not be capital. The question as to its status at any given time may be determined only by knowing whether or not the money under consideration is being used to assist in production.

This statement represents one view of capital, according to which goods assisting in production, whether directly or indirectly, are included in capital. According to another view, in order to be capital, a good must aid directly in production. The ax used by a woodman to cut down a tree is capital, because it is the product of past industry and is being used directly to assist in future production. On the other hand, the breakfast eaten by the woodman assists production only indirectly

and therefore may not be capital. Economists are accepting the latter view more and more, so that money in order to be capital must assist directly in productive operations, — that is, it must be used by the grocer to make change, by the employer to pay wages, or by the producer to purchase raw materials.

This newer view has the advantage of clarity of thought and directness of understanding. It is easy to determine, *Its advantage.* in a given case, whether an actual good is assisting in production. The ax really does aid in the productive enterprise of lumbering; while the breakfast may not only not aid in production, but, by causing indigestion, result in an actual loss of productive power. It is a simple device, therefore, to divide goods into "consumption goods" and "capital goods." Food, clothing, and shelter are obviously in the former class, while factories and machinery are in the latter group.

However, it is questionable whether all goods can be disposed of so easily. Sometimes the consumption good *Its disadvantage.* plays a most important, if indirect, part in the process of production; in fact it is often essential to the final act of production. Are we, therefore, on a mere technicality of definition, to deny such a good the right to the term capital? During the World War, for example, the production of ships at Hog Island in Philadelphia was greatly delayed, and therefore decreased, by reason of the fact that proper housing could not be provided the workers. A home for the worker was, in this case, just as essential to the production of ships as the tools with which he worked. The first aided indirectly, as much as the second aided directly, in the process of production.

As ordinarily used, the term capital refers to a more or less continuous and unchangeable thing. A business may be capitalized at fifty thousand dollars for twenty years. During this time, however, every tool and machine used in the work may have been replaced by new ones. The "capital" has remained the same, but the "capital goods" — the various elements making up the capital — have been worn out and replaced. In this fact lies an important distinction. Capital is the intangible, continuous thing which represents the total money value of the particular wealth-producing products employed in the production of new wealth. Capital goods, on the other hand, represent the individual machines, engines, and other tools of production, which wear out in the course of time and are replaced. Capital is a constant factor. Capital goods are constantly changing.

Throughout all these distinctions, however, the fundamental nature of capital is apparent. As a first requisite, capital must be material wealth. Popular writers and speakers are fond of referring to "brains" as capital and of using the phrase "capitalizing the intellect." But these expressions are merely figurative. Brains may be greater than capital, but they do not constitute capital in the economic sense, because they are not material wealth. In the second place, not all material wealth is capital. Only that part of material wealth is capital which assists in production. The part is not equal to the whole. Finally, this assistance is usually, if not always, a direct element in the process of production.

Capital
goods and
money
capital.

The con-
clusion.

QUESTIONS FOR RECITATION

1. Contrast the importance of capital before the eighteenth century with its position after the eighteenth century.
2. Give some examples of capitalistic production.
3. Define capital. Give ten examples.
4. Is your fountain pen capital? Explain fully.
5. Why do we put our wealth into railroads rather than into pyramids?
6. Are the following capital: pig iron, a plow, candy in the store, tobacco in the laborer's pipe, coal? Tell why in each case.
7. If you had \$1000 left you, would you take a pleasure trip or go to college? Why?
8. Show, by historical illustrations, the effects of war upon capital.
9. Is money capital? Why?
10. What is the most definite point of view to take regarding the way in which capital should aid in production? Give an example.
11. What disadvantages has such a point of view? Illustrate.
12. Show the difference between capital and capital goods. Give examples.

PROBLEMS FOR DISCUSSION

1. Why is labor called "the mother of capital"? Is it true?
2. What are the consequences of capitalistic production upon labor?
3. Discuss the relation between the consumption of wealth and the creation of capital.
4. Show how you yourself may become a capitalist.
5. Distinguish between natural resources and capital; give examples.
6. Distinguish between wealth and capital; give examples.
7. During the World War, did capital in the United States increase or decrease? Explain this phenomenon.
8. Does capital really produce? How?
9. Name some employment, if you can, in which labor produces without capital.

10. Are securities capital? Explain your answer.
11. Explain the importance of banks to the community.

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CHAPTER XX

THE INCREASE OF CAPITAL

I. Origin of capital

1. Capital results from saving :
 - a. How men first saved
 - b. How the habit spread
 - c. How savings are capitalized :
 - (1) By the bank
 - (2) By individuals
 - (3) By corporations
 - (4) By other companies
2. Capital may result from efficiency
3. Capital increases with :
 - a. The desire to save
 - b. The amount that can be saved

II. Kinds of capital

1. The different forms :
 - a. Circulating and fixed capital
 - b. Specialized and free capital
2. The dangers :
 - a. From too much fixed capital
 - b. From too much specialized capital
 - c. From mismanagement of capital

Origin of Capital. — When the savage of Australia found a whale, which had drifted ashore in a storm, he at once summoned his friends and neighbors and had a banquet. Sometimes they ate for a week, and sometimes longer, and sometimes they died from overeating; but they ate until all of the whale was

**Capital
results from
saving:**

gone, and then eked out an existence on berries and such food as they could find until the gods should send them another whale. Civilized man, however, has a different method of treating wealth. When he secures a large amount of food, or its equivalent in money, he does not eat it up at once, but puts by a portion for a "rainy day."

Even within comparatively modern times society has possessed only a relatively small amount of wealth, most of which was needed for present consumption. *How men first saved.* In such times, therefore, capital could be accumulated only by saving; that is, instead of consuming all that he produced, man abstained from consumption and consumed but a small amount of what he would otherwise have used up. When he had saved sufficient wealth through this abstinence, he used it to secure some new tool, such as a windmill or a sailboat, that would increase his power to produce wealth.

As a result of this early necessity for saving, the ideal of saving spread throughout the whole race by means of the teachings of the family, the schools, the *How the habit spread.* churches, and other agencies of instruction. The consequence of this education was the development of a strong desire to save. To-day this attitude is well illustrated by the immigrant, who comes to the United States and subsists on a comparatively low standard of living in order that he may have a competence for his old age.

Saving has thus become one of the virtues of civilization; yet few who save really understand the connection between saving and capital, and the great service performed by the bank in this respect. *How savings are capitalized.* A child receives a five-dollar gold piece from its grandmother and takes it home in great glee. Acting on the

advice of his parents, he puts the gold piece in the savings bank with the implicit belief that the same five-dollar gold piece will be returned by the bank whenever the demand is made upon it. But the bank is not doing business in this way.

The bank acts as a loan agent. For example, a prospective shoe manufacturer wishes to start business, and the bank, upon being furnished proper security, lends him fifty thousand dollars. The child's five-dollar gold piece, together with hundreds of similar deposits, goes to make up this loan. With the money or credit thus secured the manufacturer begins work. He builds his factory, employs labor, and enters the shoe market, using his wealth to produce more wealth. At the end of a year he has done such a successful business that he has made fifteen per cent on his original investment. Out of this fifteen per cent he pays the bank six per cent for the use of its money or credit, and out of this six per cent the bank pays the child three per cent, or fifteen cents, for the use of his five dollars. In this way, every one engaged in this capitalistic transaction has been the gainer.

For many years this was almost the only method of capitalizing savings, and it is still the most usual means employed. The bank acted as a loan agent for any one who wished to secure money and who could furnish reliable security as collateral. Its loanable funds were secured from a large number of people in the community, each of whom wished to invest a small amount of money, but no one of whom was sufficiently well off to be able to lend a large sum such as a manufacturer would require.

There were, to be sure, cases of individuals who had saved considerable sums; and, when Farmer Williams wished

to build a barn, he went to Farmer Jones and borrowed five hundred dollars on a mortgage. But this was an uncertain way of carrying on an enterprise. Every community did not have a Farmer Jones. Besides, as industry grew, neither five hundred dollars nor five thousand dollars was enough to start a business. Even though he had it, no person wished to lend the large sum necessary to begin a modern business enterprise.

To meet this contingency a new plan has recently been developed and perfected. The shoe manufacturer decides to begin business, but, instead of going to the bank with his collateral and borrowing fifty thousand dollars, he incorporates his business; that is, he secures a charter, a board of directors is appointed, and stocks and bonds are issued. These stocks and bonds are then sold to the people in the community who wish to invest their money and who do not wish to engage in business themselves. Thus, perhaps without the intervention of the bank and with the bank's profit eliminated, the business man secures his capital directly from the person who has saved it and who desires to invest it. At the same time, no one is called on to invest a large amount. A company may be capitalized for ten million dollars, but an individual, by buying merely one share, needs to invest only fifty or one hundred dollars in the enterprise.

Trust companies, insurance companies, and, in a limited sense, building and loan associations likewise exercise the functions of the bank and act as loan agents for investors and borrowers; but, in recent years, the corporation, by selling stocks and bonds and paying good rates of interest, has sometimes taken the place of the intermediary banking establishments and gone directly to the individual saver.

When wealth is scarce and living precarious, man must scrape and save in order to put something aside for the future. But the problem of capital may be looked at from another standpoint. To-day, where wealth is plentiful, man's ability to accumulate capital may depend not only on saving but also on efficiency. For example, a man earning thirty dollars a week, and desiring to become a capitalist, has two courses open to him. He may lower his standard of living, and, by consuming less than he requires, save ten dollars of his weekly wages. Or, by hard work and additional training, he may increase his efficiency so that he now has an earning capacity of forty dollars a week. This extra ten dollars then forms a fund for investment and starts him on the road of the capitalist.

The increase of capital, therefore, depends upon two elements. In the first place, man must develop the disposition to save. It is here that the ideal of thrift assumes its greatest importance. So long as individuals are wasteful and extravagant, little if any capital can be accumulated. In fact, under these conditions the capital in existence will quickly disappear. This desire to save, too, is a measure of the individual's stage of development. Civilized man is thrifty, and places the future above the present, the unseen above the seen. Primitive man is improvident, and places the present above the future, the seen above the unseen. So long as such wasteful qualities prevail, no progress can be attained. The people of Holland and France are typical examples of civilized societies that show what may be accomplished through the development of thrift in industry.

Capital may
result from
efficiency.

Capital
increases
with:

*Desire
to save.*

But the desire to save is in itself not sufficient for the development of capital. Capital will not increase merely through a desire to save; there must be some- *Amount that*
thing to save. The greater that "something," *can be saved.*
the greater will be the possibilities for the increase of capital. Here it is that the idea of efficiency becomes important. The amount of wealth produced increases with the efficiency of the worker. So long as a people are inefficient and backward in production, just so long will they fail to accumulate a large fund of capital. This has been China's great drawback throughout the centuries. On the other hand, the American system of production is so efficient that the fund from which capital is drawn is constantly increasing. Professor Friday of the University of Michigan estimated that the capital in the United States increased from \$4,522,000,000 in 1913 to \$21,510,000,000 in 1918. He further maintained that "in 1918 approximately thirty per cent of our national income" was saved.

Kinds of Capital. — We have yet to examine the different kinds of capital and the problems arising from them. Capital is described as "circulating" or "fixed," and as "specialized" or "free." *Forms:*
Circulating and fixed capital.
Circulating capital is capital which is destroyed by a single use, such as coal, and other raw materials immediately consumed. In contrast to this, fixed capital is capital which can be used for a considerable length of time without being destroyed. Examples of fixed capital are locomotives, factories, and ships.

Again, capital which is molded into a form which can be used only for a particular purpose is called specialized

capital. The degree of specialization may be great or moderate. For example, a press which will stamp out *Specialized capital.* twenty-dollar gold pieces is an extreme form of specialized capital, because there are but a few places in the world where twenty-dollar gold pieces are stamped. A crane built to carry fifty tons is a less specialized form of capital. The crane may be of service in any one of several industries, while the coin press can be used in but one.

In contrast to this, capital is said to be free when it exists in a form that may be used in a large number of industries. For example, pig iron is free capital. *Free capital.* It can be converted into carriage springs, drills, car wheels, and hundreds of other things. The ordinary machinist's lathe is somewhat specialized, but it would be considered almost free in contrast with a lathe made to turn a ten-thousand-pound shaft. When capital is usable in only a few ways, it is specialized; when it is usable in many ways, it is free.

One of the great problems in the development of capital is to determine how much capital should be utilized in the form of fixed, and how much in the form of circulating, capital. Wealth in the form of *Dangers:* fixed capital cannot of course be converted immediately into circulating capital, and the progress of the community may thus be seriously hampered by the lack of a sufficient amount of circulating capital. For example, one of the causes of the panic of 1873 was the conversion of a large amount of the wealth of the community into fixed capital in the form of railroads. As it turned out, too great a proportion of the country's wealth was put into this form of capital and a business tie-up resulted.

From too much fixed capital.

In the same way, if too large a proportion of capital is turned into specialized goods, it is clear that industry will suffer because of a lack of capital which can be diverted into the kinds of production that will meet the changing demands of modern society. In the early part of the nineteenth century an enormous amount of wealth was converted into canals, — a form of fixed specialized capital. Many more canals were built than the traffic warranted, and the wealth sunk in many of the canal projects was completely lost. The present mobility of capital in the United States, that is, its ability to change from one use to another, is shown by the marvelous growth of the automobile industry. So long as capital is sufficiently mobile to flow readily from one industry to another, or so long as there is sufficient wealth to form capital for new industries, the industrial conditions in the community are sound.

*From too
much spe-
cialized
capital.*

Since modern production is so intimately connected with the maintenance of capital, the question of its management is of vital importance. Capital is brought together in a corporate form by a great aggregation of small investments. If, therefore, this capital is managed, not in the interest of stockholders, but in the interest of officers of corporations, the whole community will be in danger, because the loss due to mismanagement will fall on the rank and file of industry as well as upon the stockholders. The welfare and prosperity of the United States are intimately dependent upon wisdom and integrity in the management of capital.

*From mis-
manage-
ment of
capital.*

QUESTIONS FOR RECITATION

1. Describe the life of primitive man so far as it affects the accumulation of capital.
2. Give some examples of modern counterparts in this respect.
3. Why did man in his early history continually have to practice abstinence? Why does he still have to?
4. Is it possible to satisfy all our wants? If we cannot, which wants should be left unsatisfied? Why?
5. Explain how the habit of saving has spread.
6. Through what modern agencies are savings capitalized? Explain how each operates.
7. Why are individual savings nowadays inadequate separately to capitalize modern business? What modern devices are employed to overcome this difficulty?
8. Trace the history of a ten-dollar bill after it is deposited in the bank.
9. Show the part played by efficiency in the accumulation of capital.
10. Upon what does the increase of capital depend? Explain each factor.
11. Show why capital is either scarce or plentiful in:
 - a. Mexico.
 - b. United States.
 - c. China.
 - d. France.
 - e. Spain.
 - f. Holland.
12. Name four kinds of capital; explain and give examples of each.
13. Show the danger that may result from "tying up" too much capital.
14. How may capital be mismanaged? What evils may result? What should be the proper method of management?

PROBLEMS FOR DISCUSSION

1. What prompts the average man to save?
2. Why do Americans sometimes look down upon immigrants who maintain a low standard of living in order to save?
3. Is it better for a man to maintain a high standard of living, or to save by lowering his standard? What other course is open to him?

4. Is the spender or the saver more advantageous to the community? Explain fully.

5. Is it wise to increase the amount of capital in the United States? Why?

6. Is the effective desire of accumulation stronger in Central or South America? Why?

7. Distinguish between saving and hoarding, and the effect of each.

8. Is the miser or the spendthrift the more useful member of society? Why? Who is more useful than either? Why?

9. Speaking of the Galveston flood, a writer said: "Fortunately, such events are not unmixed evils. Employment will now be found for many laborers, and this benefit should not be forgotten or minimized by us." What do you think of the statement?

10. Is a football celebration which results in the breaking of \$200 worth of windows advantageous to the cause of labor? Apply the principle here involved to society in general.

11. What would happen if there should be too much saving?

12. Criticize the following: "Doubtless the best thing to do about the spendthrifts is to do nothing — not even to worry about their waste of money. Their waste of money, in fact, is the least silly thing they do, for the money is in constant flux, and serves its purpose."

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CHAPTER XXI

CAPITAL AND SURPLUS WEALTH

I. Nature of surplus wealth

1. Its meaning :
 - a. Individual surplus
 - b. Social surplus
2. Its causes :
 - a. Coöperation :
 - (1) The early method
 - (2) The present method
 - b. Growth of population
 - c. Advance of civilization

II. Effects of surplus wealth

1. When unduly centralized
2. When widely distributed :
 - a. On goods and prices
 - b. On education
 - c. On leisure
 - d. On recreation
 - e. On city life
 - f. On capital
3. The conclusion

Nature of Surplus Wealth. — Intimately connected with the subject of capital is the problem of surplus wealth.

**Its
meaning:**
*Individual
surplus.*

In fact, surplus wealth is the starting point of capital. In order that wealth may produce more wealth, part of the original wealth must be set aside for purposes of future production.

The difference between the wealth produced and the wealth

consumed is surplus wealth. All of this surplus, however, may not be devoted to future production. Part of it may later be wasted, or be finally used up in some unproductive manner. The residue of the surplus which is actually used to assist in future production constitutes the fund from which capital is drawn. The individual surplus is that part of the total surplus which has been accumulated largely through the individual's own labor in conjunction with the other two factors of production. In primitive times, for example, practically all the surplus wealth created was an individual surplus, because land was largely free and whatever capital existed was extremely crude. But, where primitive peoples lived communistically, even this individual surplus was socially appropriated.

In modern times the conditions of production have altogether changed. The simple relationship between man and nature no longer exists, and, in addition to this fact, large masses of capital are *Social surplus.* already accumulated. Men now work together in large groups, so that most of the wealth created can no longer be said to be the result of merely individual labor. Modern wealth is distinctly social in character; the group, as a whole, plays a predominating part in its production. Therefore, just as primitive man by individual effort may produce a surplus of goods over and above what he requires for daily life, so society, through some form of social action, may produce a vast surplus of goods beyond what is needed for present consumption. Hence this surplus of products, the result of social rather than individual action, may be said to be a social surplus. Not all of this social surplus is capital, however, because only part of it may be used to aid in future production.

In the creation of surplus wealth society plays its part either through coöperation, or through the growth of **its causes:** population, or through the general advance of *Coöperation.* civilization. In the first place surplus wealth is the result of coöperation. Men working together can produce vastly more than men working singly. An example of this may be seen in the production of any ordinary commodity, such as nails. Formerly, each nail was hammered out on an anvil by the strong arm of an artisan; now, a long wire runs into one end of a machine and comes out of the other in the form of a finished nail. This change in method has had a marvelous effect on the output. Fifty years ago one man might hammer out a hundred nails an hour; to-day, by changing the method of production, a swift-moving machine produces thousands of nails in the same time.

This change in method is based on coöperation. Men work together in groups and then these groups work together. One set of men make iron ore into steel; another set make iron and steel into the nail-making machine; another make the belts, the screws, and the gears; still another transport these products to one central place, the factory; and now, all being ready and a million hands having assisted in bringing the steel wire and the machine together, the machine produces a flood of nails which find their way into the home, the office, and the factory. All this has been accomplished because of the principle of coöperation, which asserts that two men working together can produce more than twice as much as each man working separately.

In the second place, surplus wealth results from an increase in value brought about by social action in the form

of the growth of population. This is clearly seen in the case of land values. The value of land rises with the growth of population and the consequent demand for land and its products. The lot in the heart of a populous city, or the fertile farm feeding a growing population, is many times more valuable to-day than a hundred years ago. This increase in value has been brought about, not by any one individual, but by collective action of the whole social group. Therefore, increased land values, not due to individual improvements but resulting from social activity, are social values and constitute a part of the surplus wealth of society. While, under our present system, they may enrich the individual owners, they are, nevertheless, created by society.

Finally, surplus wealth is due to advancing civilization. No invention is the work of one man, but the final triumph of a long line of preceding inventions. Processes, systems of work, railroads, streets, — in fact the whole fabric of society, — are begun by one generation and handed on to the next. Thus each succeeding generation enjoys the benefit of surplus wealth previously created. Adding its own contribution to this heritage, it then passes the fabric on to its successor. In this manner future generations, securing vast returns from a system to which they contributed nothing, enjoy great quantities of surplus wealth.

Effects of Surplus Wealth. — Society has thus come to possess a vast amount of surplus wealth over and above the actual requirements of present consumption. When we consider the United States alone, the extent of this surplus is valued in billions of dollars. The period following the Civil War was one of

*Growth of
population.*

*Advance of
civilization.*

*When
unduly cen-
tralized.*

marvelous industrial expansion, which culminated in the abundant national prosperity of the late nineteenth century. This, of course, was brought about by individual as well as group action; but the social factors of coöperation, growth of population, improved processes of production, and perfected organization of industry played the dominating part in the creation of this surplus wealth. The tendency, however, of this surplus was to become relatively centralized in the hands of a small group of people who thus exercised great economic and political power over the community. The advantages that might have accrued to the community, through this great increase in wealth, were therefore largely confined to the small group controlling the surplus.

When this surplus is widely distributed throughout society, the effects are entirely advantageous to the community. The most direct effect of this surplus, if it could be legitimately diffused throughout American society, would be seen in the quality, quantity, and prices of goods consumed by the people. A better grade of goods would be produced in larger quantities at cheaper prices. For example, the natural effect of an improved process of making shoes should be to increase the output and to lower the price of shoes to the advantage of all who wear them. This process of bettering quality, increasing amount, and decreasing price should continue until every member of the community has an opportunity to secure enough economic goods to maintain an efficient standard of living.

The surplus wealth of society may also make itself felt in other less direct ways. For example, when there is a great mass of social wealth in a community, society

may offer opportunities for individual improvement otherwise unattainable. In our large cities this advantage is frequently seen in the great number of publicly *On* or privately endowed lecture halls, libraries, *education.* museums, schools, and colleges, which open to the average man and woman lines of work hitherto unattainable.

Likewise, the surplus makes possible wide opportunities for leisure and recreation. In modern life leisure is essential. Leisure does not mean idleness, but time *On* in which men are free to do as they desire. The *leisure.* nail machine has its advantage in increased output; its disadvantage, in monotony and sameness. Since his work is largely mechanical, the man who tends this machine learns very little. Therefore, if such a man is to live a full, rounded life, he must have leisure, — free time in which to walk and read and think.

Through the shorter working day, surplus wealth makes leisure possible. Surplus wealth results in surplus time. Part of this time should be devoted to recrea- *On* tion, — to activities of a relaxing nature which *recreation.* require neither concentrated thought nor monotonous movement. In the country, recreation is easily had; but in the city, opportunities for recreation, unless created in the form of parks and playgrounds, are extremely limited. Therefore, the surplus wealth of society should provide the community with opportunities which will prove adequate substitutes for the lost recreation facilities of country and village life.

It is evident, therefore, that this surplus should have a decided effect upon the conditions of city life. This wealth of society should be diverted into various channels. Not only should recreation facilities be provided, but the

city should be made beautiful. In this respect, America has much to learn from Europe. Public architecture should be of the finest character. Streets should be widened, trees planted, symmetry in architecture maintained, and every effort made to beautify the city.

Finally, surplus wealth, when widely distributed, will have a marked effect upon the increase of capital. We have seen that surplus wealth is the starting point of capital. In early days, when wealth was scarce, this starting point was difficult of attainment. The hard-fisted man was in great demand because it was only through stinting and close living that capital was amassed. But with the growth of surplus wealth, man need not necessarily lower his standard of living in order to create a fund of capital. In fact, the more man consumes wisely, the greater will be his productive power. Through increased consumption, made possible by surplus wealth, man will increase his efficiency and, thereby, add his quota to the surplus wealth from which capital is drawn. Thus, surplus wealth, by decreasing the necessity for abstinence, will cause men to realize more and more that efficiency, not parsimony, is the key to individual as well as social welfare.

When we realize the benefits to society that accrue from a wide distribution of its surplus wealth, it becomes important to inquire whether, with justice to all individuals, this surplus may not be more generally diffused throughout the community. Without disturbing the right of private property and the corresponding right of the individual to amass a large fortune, is it not possible for wealth that is distinctly social in character

to be partially shared, through some legitimate method, by all members of the community. For example, this diffusion of surplus wealth has already been partly accomplished by philanthropists, who voluntarily return to the community its wealth in the form of libraries, universities, and other public institutions. Again, far-seeing employers distribute this wealth among the workers in the form of higher wages and greater participation in profits. In addition to these voluntary methods of sharing surplus wealth, there are also other means of distributing the surplus through the demands of labor organizations and through changes in our system of wealth distribution. But by far the simplest method of sharing this surplus is accomplished through taxation. The income tax and the inheritance tax constitute two effective means of returning to society the wealth that social action has been largely instrumental in creating.

QUESTIONS FOR RECITATION

1. Define surplus wealth. Give examples.
2. Explain the difference between individual surplus and social surplus.
3. What change in methods of production has made surplus wealth possible? Show how the new method differs from the old.
4. What are two other causes of surplus wealth? Explain the part played by each.
5. Explain the effects of surplus wealth when it is highly centralized in the hands of a comparatively few individuals.
6. Explain the effects of surplus wealth when it is widely distributed throughout the community.
7. Explain how philanthropists return surplus wealth to the community.
8. How do far-seeing employers handle the problem of surplus wealth?

9. Explain clearly how this surplus may be returned to the community through taxation.

10. Mention some more radical measures of distributing surplus wealth. Show the objections to these measures.

PROBLEMS FOR DISCUSSION

1. What are "socially created values"?
2. What relation exists between coöperation and surplus wealth?
3. Explain why coöperation can accomplish more than individual action.
4. What factors lead men to coöperate?
5. What may surplus wealth mean to the individual? To society?
6. What is the relation between population growth and the social surplus?
7. How may the surplus affect prices? Production?
8. What relation does surplus wealth bear to education? Leisure? Recreation? City life?
9. Why was the old concept of saving absolutely necessary?
10. How is this concept altered by the presence of large surplus wealth?

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CHAPTER XXII

AMERICAN AGRICULTURE

- I. Its early development
 1. In the North
 2. In the South :
 - a. The agricultural conditions
 - b. The effect of the cotton gin
 3. In the West :
 - a. Effect of steam engine
 - b. Effect of public land policy
 4. Importance of machinery :
 - a. Early agricultural methods
 - b. Modern improvements
 5. The final result
- II. Its present status
 1. Importance of agriculture
 2. Kinds of agriculture :
 - a. General farming
 - b. Production of cereals
 - c. Stock raising
 - d. Dairying
 - e. Fruit growing
 - f. Market gardening
 3. Agricultural training

We have now examined the parts played by land, labor, and capital in the production of wealth. We have seen that in all three of these respects the United States is unusually fortunate. So far as the requisites of production are concerned, national prosperity and individual welfare

are attainable in America. What use, then, has the United States made of these abundant resources of land, labor, and capital? Has the nation neglected its opportunities, or has it developed a system of wealth production in keeping with its natural possibilities? This question may best be answered by an examination of the progress attained in American economic life along the lines of agriculture, industry, and transportation.

Early Development of Agriculture. — In a previous chapter the fundamental physical differences between the North and the South were indicated. *In the North.* Northern environment, with its thin soil, mineral deposits, and cold climate, made an industrial society inevitable. The Northern colonists turned naturally to lumbering, fishing, commerce, and later to mining and manufacturing. But even here, from the earliest days, agriculture was also developed, furnishing the colonists with grain, live stock, fruit, and general farm products.

The South, however, was the natural home of agriculture. Its genial climate and fertile soil led the early colonists to disregard their industrial possibilities and turn *In the South: The agricultural conditions.* their attention to the cultivation of tobacco, rice, indigo, and cotton. The institution of slavery also fostered this agricultural development, and, in turn, was made profitable by it. While slave labor, because of its lack of intelligence, was not particularly suited to the growing of tobacco, it was nevertheless well adapted to the cultivation of rice, because in the rice swamps slave labor could be readily worked in gangs.

In the cultivation of cotton, however, slavery received

its real impetus. In 1793 Whitney's cotton gin made possible a mechanical separation of the cotton seed from the fiber. This device brought about the growth and manufacture of cotton on a large scale. *Effect of cotton gin.* Cotton cloth ceased to be expensive because the gin cleaned as much cotton in a day as had been cleaned formerly by hundreds of slaves. In this manner, cotton became the most profitable crop of the Southern planter because it could be grown by slaves managed on the gang system. The planters increased the size of their plantations, added to the number of their slaves, and extended the cultivation of the cotton crop from Cape Hatteras to Texas. The South had crowned her king.

Meanwhile, a parallel agricultural movement was progressing in the West. From the opening of the Northwest Territory to the settlement of Washington and Oregon, the land west of the Allegheny Mountains was transformed from a wilderness into an agricultural region. In the early part of the nineteenth century, because of the impossibility of transporting grain other than by boat, settlements could be made only along the rivers. But, with the advent of the steam engine, land transportation of bulky freight became possible and the West was peopled and developed with lightning rapidity. *In the West: Effect of steam engine.*

Another important factor in the development of the West was the ease with which public lands were secured. The Federal government, abandoning the attempt to amass revenue from the sale of these lands, made every effort to induce their settlement and cultivation. *Effect of public land policy.* As a result of this policy, the pioneers pushed from the Northwest Territory into "Louisiana,"

"Oregon," "California," and "Texas." They cleared the wilderness, sold their claims, and then moved on to the next bit of wild land. In this way, the great acquisitions of territory were brought, one by one, under human control and made an integral part of the agricultural wealth of the nation.

No factor has been of greater importance in the general development of American agriculture than the use of machinery. At the beginning of the nineteenth century, the farming of the nation was done with tools little better than those used by the Romans in the days of Julius Cæsar. Horses were scarce; oxen, expensive. The land was broken up, and crops sown, cultivated, and harvested chiefly by hand power. But this kind of labor was slow and costly, and Yankee ingenuity was called upon to devise labor-saving appliances. As a result, machinery, for the first time in human history, came to play a leading rôle in the development of agriculture.

The first successful agricultural machinery in America was built during the second quarter of the nineteenth century, and was perfected toward the close of the century. The land is now plowed by a horse plow or steam plow; the grain is sown by a drill which not only spreads the fertilizer but covers the seed; the crop is cultivated and the harvest reaped by machines especially designed for the work. The country boy need no longer leave the back-breaking toil of the farm for the stifling air of the factory. The factory, in the form of modern machinery, has come to the farm and makes bearable the life of the agricultural laborer.

Based on science and bulwarked by mechanical appli-

ances, American agriculture has developed rapidly during the nineteenth and twentieth centuries. The South raises cotton, tobacco, rice, sugar, fruit, and vegetables; the West, grain, fruit, and cattle; while the East is devoted to general farming and dairying products. In three hundred years American agriculture has grown from infancy to splendid maturity.

Present Status of Agriculture. — The United States to-day occupies a premier position in the field of agriculture. Since the close of the nineteenth century, the total farm output of the country has steadily increased until, during the World War, it reached an estimated value of twenty billions of dollars. No other products compare with these in value, and there is no other single group of industries including such a large proportion of workers. The dependence of labor on agriculture is attested by the fact that, in normal times, one-third of all the labor employed in gainful occupations in the United States is engaged in some form of agricultural pursuit. A shortage of labor in this field is fraught with more danger to national life than in any other.

For convenience of discussion this occupation may be divided into the following lines of work: (1) general farming; (2) production of cereals; (3) stock raising; (4) dairying; (5) fruit growing; and (6) market gardening.

General farming is an occupation usually associated with the word "farmer." The general farmer raises live stock, has a small dairy, keeps chickens and pigs, raises some fruit, and, if near a market, grows a small amount of garden produce. As "jack of all trades and master of none," he sometimes fails to produce large or

valuable returns. For this reason the general farm is gradually giving way to some more specialized form of agricultural work.

Of these specialized agricultural pursuits, the production of cereals is by far the most important. These include
Production of cereals. corn, wheat, oats, barley, rye, rice, and buckwheat. Of these the most important are corn and wheat. The United States produces twice as much corn as all the rest of the world put together. Its region of greatest production stretches from Ohio to Kansas, and from Kentucky to Wisconsin, although it is grown in the whole area from the Gulf of Mexico to the Great Lakes and from the Atlantic Ocean to western Kansas. While wheat may be generally grown in various parts of the United States, its area of greatest production is found in the upper Mississippi Valley, in the Middle West, and in Washington and Oregon on the Pacific Coast. The belt of greatest importance stretches from Texas north through Oklahoma, Kansas, Nebraska, the Dakotas, and Minnesota into Canada. The World War stimulated enormously our production of both wheat and corn, and, by causing us to send vast shipments of wheat abroad, taught us the value of corn for table purposes.

Stock raising is an industry largely confined to the middle Southwest. Cattle are raised on the ranches of Arizona,
Stock raising. transported to Kansas, and there fattened on the corn lands. Then they are taken to St. Louis, Omaha, or Chicago, where they are slaughtered, converted into various packing-house products, and shipped finally to all parts of the world. On the Kansas farms, hogs also are fed with the cattle, fattened on the corn, and then shipped to the packing houses.

Dairying, which sometimes accompanies stock raising, is usually confined to the neighborhood of great cities. The necessity of producing dairy products within easy reach of the city is particularly seen in the case of milk, since milk cannot be transported properly for a greater distance than one hundred miles. Butter, however, is transported from the Middle West to all parts of the country. *Dairying.*

Western fruit growing was originally developed to furnish return freight for the emptied refrigerator cars. The great packing houses in the Middle West, shipping their products in cars to the Pacific Coast, *Fruit growing.* were unable at first to secure for them any suitable return cargo. However, they soon discovered that this coast was peculiarly suited to the growing of showy fruit. Thus an industry was developed which provided the empty meat cars with a splendidly paying return shipment. Then, too, apples and Tokay grapes proved to be good paying crops and were rapidly introduced from Oregon and Southern California. Fruit has, of course, always been grown on a small scale in all agricultural districts.

Market gardening has developed at a phenomenal rate during the past thirty years. Originally, farmers grew their products and hauled them in wagons to the near-by towns. Now, spinach, lettuce, *Market gardening.* tomatoes, and other green vegetables are grown in the Southern states all winter long and shipped by fast freight to the North. These products not only bring reasonable prices to Southern farmers, but they provide city consumers with green vegetables throughout the whole year. Meanwhile, hothouses have been constructed in the North in which lettuce, tomatoes, cucumbers, beans, and other

green products are grown with considerable profit. The rapid increase of city population has thus been followed by the development, all along the Atlantic seaboard, of market gardening on a large scale.

During the last half century the American people have developed and perfected so many new agricultural methods that agriculture itself has been placed on the basis of modern industry. In bringing about this result, the agricultural school has played an important part. Formerly, the farmer was an untrained man. The knowledge he possessed was inadequate and traditional. To-day, however, on the farms of the Middle and Far West there are many thousands of men who have taken technical courses in agriculture. These men are trained in the modern science which has revolutionized agriculture as well as industry, and are equipped with a knowledge of business methods. Upon men of this character depends our future agricultural progress.

QUESTIONS FOR RECITATION

1. Explain why the North is not preëminently agricultural. Why it is preëminently industrial.
2. What does the South produce? Why?
3. Why was slavery profitable in the South, but not in the North?
4. Why did not the cotton gin decrease the need for slave labor?
5. What factors developed agriculture in the West? Explain each.
6. Explain early methods of agriculture in the United States.
7. Show the importance of modern agricultural machinery.
8. Name the chief products of the East, South, and West.
9. Why is agriculture a basic industry?
10. Name the chief kinds of agricultural work in the United States. Explain what you mean by each.

11. Why is the general farmer turning more of his attention to specialties?
12. Name the chief areas of corn and wheat production in the United States.
13. What parts of the country are most interested in stock raising?
14. Where is the center of dairying? Of fruit growing? Of market gardening?
15. Why is agricultural training important?

PROBLEMS FOR DISCUSSION

1. What causes make it possible for the percentage of our population engaged in agriculture to decrease?
2. Why have many people left the farms for other pursuits? Is this migration likely to continue?
3. Agricultural experts tell us that by using present amounts of labor, land, and capital according to the most effective plans of agricultural production already known, the productive efficiency in this industry could be doubled in a year. Why is this not done? What forces are working in this direction?
4. Why should the forces of custom, habit, and inertia be stronger in agriculture than in other pursuits?
5. What functions do you think the agricultural colleges perform?
6. When good means of transportation opened up markets for the produce of the Western pioneers, what changes took place in agricultural production?
7. Under what conditions are we apt to have diversified farming? Single-crop farming?
8. What is the difference between extensive and intensive agriculture?
9. Why is agriculture in Europe more intensive than in the United States?
10. If you were to take up agriculture as a profession, what branch would you select? Why?
11. What was the effect of the World War upon our agricultural development?

12. What danger did agriculture face when this war was over?
13. Is agriculture to-day yielding a diminishing return?

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CHAPTER XXIII

THE PROBLEM OF SOIL FERTILITY

- I. How the soil is exhausted
 1. Why fertility is important
 2. Causes of soil exhaustion :
 - a. The "one crop" system :
 - (1) Examples
 - (2) Evil results
 - b. Lack of "humus"
 - c. Waste of manure :
 - (1) Examples
 - (2) The estimated loss
 3. The result
- II. How fertility may be restored
 1. The essential elements
 2. Means of soil conservation :
 - a. The fertilizers :
 - (1) Chemical fertilizers
 - (2) Animal products
 - (3) Barnyard manure
 - b. Cover crops :
 - (1) Their meaning
 - (2) Their purpose
 - (3) Value of "legumes"
 3. The outlook

How the Soil is Exhausted. — Intimately connected with the subject of agriculture is the problem of soil fertility. We have seen that land is inherently subject to the law of diminishing returns, and that, consequently, the longer the soil is worked the less is likely to be its

fertility. Hence the question of maintaining the productivity of the soil becomes of paramount importance. Man must combat the tendency of land to yield a decreasing return. But, in spite of this necessity, little attention has been given, until recently, to the conservation of soil fertility in the United States. In this country rich soil has been so abundant that man, rather than spend time and effort upon the conservation of a particular soil, has simply moved from land of diminishing fertility to one of increasing return.

Through carelessness or ignorance, the American farmer has often unnecessarily exhausted the fertility of the soil.

Causes of soil exhaustion: This exhaustion has resulted chiefly from the "one crop" system, from the lack of "humus," and from the waste of manure. The one crop system, used for years in the South, is disastrous to soil fertility. There, the same piece of land, year after year, was used for growing tobacco or cotton, and, when the planter began to notice a decreased return, he simply moved to another fertile spot which he likewise devoted to the exclusive production of one crop. If, instead of confining his production to this crop, the farmer had practiced scientific rotation of crops, the soil might have retained its fertility almost indefinitely.

The one crop system has two evil results. In the first place, it causes the soil to be exhausted of that particular element required to grow the special crop, so that eventually the cultivation of the crop on that land will have to be abandoned. In the second place, the insect enemies and bacteria, which prey upon that crop, will multiply to an alarming extent and ultimately prove disastrous to its cultivation.

Again, soil exhaustion has resulted from the lack of "humus." Humus is decayed organic matter. It is essential to fertility because it loosens the soil, *Lack of* permits the entrance of air and sunlight, holds *"humus."* moisture, and finally furnishes food elements for plant growth. This humus has been provided by nature through the leaves of trees and other natural products. By cutting down trees and destroying plant life, man has often removed the source of humus.

Another reason for soil exhaustion is found in the waste or disuse of manure. Sometimes, when manure piles become so large as to be in the way, a farmer *Waste of* simply removes his barn, the thought of using *manure.* the manure as fertilizer never entering his head. In the abandoned farms of New England, we find a less extreme but, unfortunately, more general instance of the failure to utilize manure properly. For generations, the New England farmer planted his crops, — hay and grain, — cut them, fed part of them to his cattle and horses, and shipped the remainder to town. The part which he fed to his stock was returned to the land in the form of stable manure. But this manure, while piled up in the barnyard for several months of the year, was depleted of its liquid portion and of that portion which leached out. Thus the farmer each year returned to the soil less than he had taken from it.

Some idea of the loss entailed by this waste may be gained from an estimate made by the United States Department of Agriculture. This department estimated that \$250,000,000 represented the annual loss resulting from the failure to utilize manure efficiently. This loss might be prevented simply by conducting the liquid to

cement pits on cement floors, instead of permitting it to run off into the barnyard.

As a result of this carelessness or ignorance of the American farmer, the soil of the United States, in certain sections of the country, is being unnecessarily exhausted of its natural fertility. This exhaustion has been taking place rather rapidly in the plantations of the South, and more slowly in the farms of New England. To-day, as evidence of this, great stretches of land lie unused in both districts. In these regions, therefore, the law of diminishing returns from land has been in actual operation, simply because man has not cultivated the soil in accordance with the principles of scientific farming.

How Fertility May Be Restored. — In addition to the practice of scientific farming and the proper maintenance of humus, soil fertility depends chiefly upon the presence of three chemical elements, — nitrogen, phosphorus, and potassium. Of these three elements, potassium, which is found generally in clay soils, is most easily obtained. Nitrogen is secured chiefly through ammonium compounds, while phosphorus exists in bone meal, guano, and phosphate rock. The maintenance of soil conservation depends, therefore, largely upon the presence of these three elements in the soil.

To maintain these essentials either chemical fertilizers, animal substances, or barnyard manure may be applied to the soil; or green cover crops may be plowed under to act as fertilizer. Chemical fertilizers, such as nitrate of soda, muriate of potash, and acid phosphate, furnish the needed chemical elements without providing the required humus for the soil. On the other hand, fertilizers which are animal products,

The result.

The essential elements.

Means of soil conservation:

The fertilizers.

like ground fish and dried blood, do contain organic matter which decays in the soil. Of especial value, however, are stable manure and green crops used as fertilizers. These possess not only chemical elements, but are particularly valuable for their humus. While stable manure is very effective, its high price may prevent its use from becoming general.

On the other hand, green or cover crops are cheap and equally effective. A cover crop is a crop sown with the avowed purpose of plowing it under when it reaches the proper stage. The farmer sows *Cover crops.* this crop in the late fall and lets it cover the ground all winter, because he knows that something is bound to grow on his land during the late fall and early spring. He prefers to have a crop which he may use for purposes of fertilization, rather than a mass of weeds which will stand in the way of cultivation. Then too, in midsummer, when he ceases to cultivate corn, the wise farmer, instead of allowing weeds to grow unchecked, plants a cover crop between the rows of corn. These crops not only protect the ground from the fierce rays of the sun and thus help it to hold moisture, but they also develop a good growth of stalks and leaves that will prove invaluable as green manure when they are plowed down and left to rot.

Of these cover crops the most valuable are "legumes," — peas, beans, clover, vetch, rape, and alfalfa, — on the roots of which appear small bulbous formations containing ammonium compounds from which nitrogen is derived. These nodules are the product of bacteria which turn air nitrogen into soil nitrogen. Through few, if any, other plants can the free nitrogen of the air be converted into nitrogen that may be utilized by plants themselves. These

legumes, therefore, not only furnish splendid stalks and leaf growths for humus, but, in addition, fix that most expensive of the fertility elements, nitrogen.

Thus it may be seen that, in America, the problem of soil fertility is not difficult of solution. While it is true that many sections of the country, through ignorance or carelessness, have suffered the effects of soil exhaustion, it is equally true that these same regions, by wise care and management, may be restored to their former fertility. It is likewise evident that there is no necessity whatsoever for the soil enjoying present fertility to be exhausted of its fertile qualities. Scientific farming, good judgment, and increased knowledge are the factors essential to a successful solution of the problem. The agricultural school to-day attempts to supply the farming population with this increased knowledge.

QUESTIONS FOR RECITATION

1. Why is the question of soil fertility becoming increasingly important?
2. Can you give any examples of the one-crop system in the United States to-day? State its evil effects.
3. What is humus? What are its uses?
4. Explain how manure is wasted.
5. By what methods may manure be more effectively used?
6. What are the results of soil exhaustion?
7. Upon what chemical elements does soil fertility depend? State where each is found.
8. Name some animal products that are good fertilizers.
9. Why are manure and cover crops especially valuable as fertilizers?
10. What are cover crops? When and why are they planted?
11. Name the legumes. Explain their value to the farmer.
12. What is meant by "scientific farming"?

PROBLEMS FOR DISCUSSION

1. Contrast the soil of the United States to-day with the condition of the soil in the early nineteenth century.
2. What does soil exhaustion involve?
3. Discuss the remedies for soil exhaustion.
4. Explain the principle of rotation of crops.
5. Describe the means that nature provides for the maintenance of humus in the soil.
6. How have men thwarted nature's means of humus conservation?
7. Describe an abandoned farm and explain fully how you would restore its fertility.
8. What does your own state do to maintain or improve its soil fertility?
9. What does the United States do in this direction?
10. Contrast the care taken of the soil in this country with the work in this direction in France or Holland.
11. To what extent would you say the law of diminishing returns is at work in the United States? Explain fully.
12. Is this tendency likely to increase or decrease in this country? Why?

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CHAPTER XXIV

NEW FORMS OF PLANT AND ANIMAL LIFE

- I. The process of selection
 1. Artificial selection :
 - a. Meaning and example
 - b. How accomplished
 2. Natural selection :
 - a. Meaning and example
 - b. The final result
 3. A fundamental difference
- II. How man utilizes selection
 1. In changing animal life :
 - a. The transformed hog
 - b. Different types of horses
 - c. The modern hen
 2. In changing vegetable life :
 - a. The new variety of wheat
 - b. New varieties of corn
 - c. New fruits and vegetables
 3. The conclusion

Another problem connected with agriculture is that furnished by the conscious production of new forms of plant and animal life. Formerly, such a change in the natural order would have been regarded as evidence of witchcraft, and the person possessed of this power promptly burned at the stake. To-day, however, this is rightly regarded as one of the triumphs of modern agriculture.

The Process of Selection. — Selection is either artificial or natural. Artificial selection is the process by which men perpetuate or destroy certain desirable or undesirable characteristics in animals and plants. For example, the cat, belonging to one of the most ferocious families in the animal kingdom, was originally fierce and wild. To-day, it is so gentle and quiet that it loves to be played with and caressed. It has, indeed, become the plaything of children.

Artificial selection:
Meaning and example.

How has this wonderful transformation been accomplished? Simply by a process of artificial selection. For centuries, man has not permitted any but the gentlest cats to live. In this manner, the quiet and docile cats, generation after generation, transmitted their gentle characteristics to their kittens, until to-day we have the domestic pet at our fireside. By a similar process other domestic animals were transformed from wild into tame creatures. Man selected in the parents those qualities he desired in the offspring, and thus determined the character of the coming generation.

How accomplished.

In natural selection man plays no part. Natural conditions determine those that are to survive, and their qualities are thus transmitted to their offspring. For example, in the wilds of India, ferocity is essential to the cat family. Survival depends on this quality. Hence, the ferocious tiger survives, while the less ferocious is easily killed or starves to death. In this manner a rigorous process of natural selection destroys the gentle and perpetuates the fierce qualities required in the tiger.

Natural selection:
Meaning and example.

By the process of natural selection, those forms of life best able to escape enemies in their particular locality

adapt themselves to it, and survive. But thousands of others, not so well adapted to their environment, are killed in their struggle for existence. A good sized cod lays from thirty to fifty millions of eggs, but only a few of those that are hatched ever survive to adult life. The remainder are destroyed by the cod's enemies either before or after hatching. Thus, in the course of centuries, this "survival of the fittest" produces a creature best adapted to its own environment.

Natural and artificial selection differ in one fundamental respect. The former is unconscious; the latter, conscious and deliberate. Natural selection occurs unknowingly, without the intervention of any conscious will, while artificial selection takes place with a deliberate end in view. The cod's young are accidentally destroyed by their hungry enemies who have no thought of developing a strong type of codfish. On the other hand, the fierce, wild cats are deliberately killed by man in order to produce a quiet, gentle type of cat.

How Man Utilizes Selection. — Through artificial selection men have changed, and are still changing, various forms of life coming within their power. This may be seen both in the animal and vegetable world. Southdown sheep and the two-minute trotter are products of artificial selection just as much as the thornless cactus and the Burbank potato. In fact, artificial selection has revolutionized animal life. A striking instance of this is seen in the transformation of the hog. The wild mountain hog, with his sharp back, raw-boned body, and long legs, was little suited to the pork market. The hog breeder, therefore, proceeded to change this scrawny, razorback creature into a fat, edible

The final result.

A fundamental difference.

In animal life:

The transformed hog.

animal. This he did by selecting from each generation the short-legged, fat, quiet hogs to be the parents of the next generation. In this manner, after the process had continued many years, a type of hog satisfying all the requirements of the market was produced.

With horses this same process of selection has been carried on. Some horses must be fast, others suited to light work, and still others capable of drawing the heaviest loads. In response to these demands, horse breeders, by proper mating, have finally developed fast race horses, all-around work horses, and draught horses of great bulk and strength.

Chickens have likewise been transformed. The hen, in her wild state, laid a few eggs a year and hatched them all. The modern hen — the product of careful artificial selection — lays ten times as many eggs in the course of a year and may even be induced to refrain from setting. The value of this increased egg supply is obvious. While the cost of raising chickens remains the same, the additional eggs furnish the farmer with increased profits.

Recently, however, the most remarkable results from artificial selection have been attained in the development of vegetable rather than of animal species. Students of plant life, during the later nineteenth century, created many new vegetable types. Consider, for example, the work of the government experiment stations in developing a new variety of cereal capable of resisting disease. The gravest foes of the farmer during late years have been blight, scale, and similar forms of plant disease. An attempt was therefore made to develop a species of wheat that would not succumb

*Different
types of
horses.*

*The modern
hen.*

*In vege-
table life:
The new
variety of
wheat.*

to blight. Experiment after experiment was made with this end in view, and men were sent all over the world to look for kinds of wheat that would resist blight. Such a type of wheat was finally evolved. At the same time, experiments were being made on the dry lands of the West, where the rainfall is only one-third of that along the Atlantic plains. Here, the land being fertile and the water scarce, a kind of wheat capable of resisting drought was produced. Eventually, by careful selection, there was further developed a variety of wheat not only requiring little moisture, but also comparatively free from blight.

The corn belt in the Middle West furnishes another interesting example of the results of selection. The

*New
varieties
of corn.*

manufacturers of corn oil desired a corn containing a high percentage of oil, while the manufacturers of certain corn food found a low percentage of oil desirable. To meet these different demands, experiments were made on a certain variety of corn containing six per cent of oil. As a result, this same corn in the course of a few years was made to produce one variety containing nine per cent of oil, and another containing two per cent of oil.

*New fruits
and
vegetables.*

In the same manner the principle of artificial selection has been utilized to produce new kinds of fruits and vegetables. Burbank displaced the red potato by the artificial white one, and thus realized the picture of a potato he mentally patterned in 1873, — "A potato with a better flavor, one with a relatively larger amount of sugar, one that will be a larger size and all of the same uniform shape and size, and one that will better resist diseases and be a larger yielder than any potato now known." Through the same means,

the splendid market tomato has been evolved from a weed ; the luscious Baldwin is the descendant of the thorn apple ; and Burbank, in the near future, promises a seedless strawberry.

Artificial selection has thus proved one of the most potent forces at the disposal of the agriculturist. Through it he has been enabled to revolutionize his industry, and to place upon the market multitudes of nutritious vegetable and animal products. In industrial life, through the domestication of animals and the gradual development of beasts of burden, artificial selection has exercised an equally potent influence. The conclusion.

QUESTIONS FOR RECITATION

1. Define the process of selection.
2. Explain the difference between artificial and natural selection.
3. Give examples of each kind of selection.
4. Show how each kind of selection is accomplished.
5. Explain the meaning of "the survival of the fittest." Give examples.
6. What is the purpose of artificial selection?
7. Why is a knowledge of artificial selection useful to the modern farmer?
8. Explain in detail what artificial selection has accomplished in the animal world. Give illustrations.
9. Show how it is of value in the poultry business.
10. What has artificial selection done for the production of cereals?
11. What has it accomplished in the fruit and vegetable world?

PROBLEMS FOR DISCUSSION

1. Discuss the meaning of evolution.
2. Apply the doctrine of evolution to the development of man.
3. What kind of selection is most dominant in the evolution of primitive man? Of modern man? Why?

4. Discuss some of the important contributions of artificial selection to agriculture; to civilization.
5. Can you cite any local instances of the selection process?
6. Show how the process of selection operates in your own school life.
7. Explain the process of the domestication of animals.
8. Discuss the meaning of eugenics.
9. What may eugenics accomplish for the human race?
10. What are the limitations of the principle of artificial selection when applied to human beings?

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CHAPTER XXV

EARLY AMERICAN INDUSTRY

- I. Origin of American industry
 1. Kinds of industries
 2. The colonial policy :
 - a. Meaning and application
 - b. How carried out :
 - (1) By industrial restrictions
 - (2) By commercial regulations
 - c. Effect of this policy
 3. Condition after the war :
 - a. The new danger
 - b. The proposed remedy
 4. Effect of War of 1812
- II. The Industrial Revolution
 1. The "domestic system"
 2. Inventions :
 - a. Their importance
 - b. Their effects :
 - (1) On mechanical power
 - (2) On transportation facilities
 - (3) On labor-saving devices
 3. The "factory system" :
 - a. Its essential features
 - b. Its advantages :
 - (1) In production
 - (2) In consumption
 - c. Its disadvantages

Another form of wealth production which developed marvelously in the nineteenth century is found in the

realm of industry. An examination of American economic life will show that, not only in agriculture, but also in manufacturing, is the United States realizing its latent possibilities.

Origin of American Industry. — The American colonists found open to them three kinds of industries. In the first place, they might engage in the primary industries, such as lumbering, mining, and quarrying, which are concerned in converting natural resources into the raw materials of industry. In the next place, they might engage in the secondary industries, which work on the raw or semi-finished products, such as ship-building, iron manufacturing, and the manufacture of woolen goods, hats, clothing, and similar articles. Finally, the American colonists might engage in another form of industrial activity, — commerce. The harbor facilities, the proximity of the West Indian markets, together with the development of industry and of agriculture, afforded every opportunity for an easy exchange of commodities.

Had the colonists been content to engage only in the primary industries, involving the production of raw materials, they might have escaped coming into economic conflict with England. According to the general colonial policy of the seventeenth century, colonies existed for the good of the mother country. It was their function to supply raw materials for the home country to manufacture and sell back to them. England attempted to apply this theory by requiring the colonies to produce only raw materials, by transporting these raw products in her own ships to be manufactured at home, and by carrying back in her own vessels the finished products to be sold in America. In

**The
colonial
policy:**
*Meaning
and
application.*

this way, the English manufacturer and merchant made several intermediary profits.

To carry out this policy effectively, England resorted to many devices. Since manufacturing involved the use of machinery, the home government passed acts prohibiting the exportation of machinery to the colonies. But, despite this discouragement, the colonists journeyed to the English factories, imported some labor, brought in an occasional drawing or pattern, and, above all, proceeded to invent their own implements. England also discouraged American industry by passing acts forbidding the colonies to manufacture certain goods produced in England. This prohibition was particularly severe on the New England colonies, where every effort had been made to encourage industry.

To accomplish its end, Parliament further passed, toward the close of the seventeenth century, the Navigation Acts regulating and restricting commerce. Under these acts, the monopoly of English trade was to be held by English ships and English subjects. As the colonists began shipbuilding at an early date, these acts struck a hard blow at a rising American industry and a growing American commerce.

The effect of this policy, which, it must be remembered, was the general colonial policy of all European nations at that time, was to accentuate the gradually growing differences between the colonies and the mother country. The North suffered most severely from the effects of this narrow policy and objected most strenuously to its enforcement. It denied to the inhabitants of this region their logical occupations, — shipbuilding, manufacturing, and commerce. This denial, added to the denial

of political rights to the colonists, intensified the coming struggle for political independence. So often do we emphasize the political side of this struggle, through the battle cry of "taxation without representation is tyranny," that it is well here to bear in mind the economic factors at work in the separation of the colonies from the mother country.

While the Revolutionary War was in progress, national industry was really beginning. The English blockade, following the declaration of war and continuing throughout the struggle, forced the colonists themselves to manufacturing. But when peace was declared, American industry faced a new peril. For years, European manufacturers had been stocking up goods at home. When the war was over, these goods flooded the American market. Handicapped as the American manufacturers were by crude machinery and relatively high-paid labor, they were unable to compete successfully with their foreign rivals.

To meet this situation, the American manufacturer naturally turned to some form of legislative protection.

The proposed remedy. This was first afforded by the Tariff Act of 1789. Soon after, Alexander Hamilton, Secretary of the Treasury, made a strong plea for protection in his famous report on the status of manufactures. In this report, he took the position that "customs duties" must be levied, if the "infant industries" of America were to compete successfully with the established industries of Europe. As a result of his recommendation, the rates in the Tariff Act of 1789 were increased in 1790, and again in 1792. In this manner was inaugurated that policy of protecting American manufactures, which, with slight interruptions, has continued to the present day.

Another factor of considerable importance in the early development of American industry was the situation brought about by the War of 1812. This **Effect of War of 1812.** struggle had the indirect effect of stimulating manufacturing in the United States. At that time America was still largely dependent upon England for the bulk of needed manufactured articles. When war suddenly cut off this supply, the young nation was forced to depend more and more upon her own industrial activities. In this manner home manufactures were stimulated, just as one hundred years later the World War forced the United States in much the same way to develop new dye and chemical industries.

The Industrial Revolution. — Before the middle of the eighteenth century, industry in whatever form it existed, both at home and abroad, was conducted along extremely simple lines. Its seat was in the **The "domestic system."** home, where it was closely linked with the life of the family. The primitive spinning wheel and the old-fashioned hand loom were the chief tools of production, while the labor employed was made up of members of the family supplemented by a few outside laborers called in for special purposes. Goods were manufactured at home, by hand, with the assistance of a small group of family laborers. This method of manufacture has, therefore, been called the "domestic system" of industry.

As contrasted with this early method of manufacture, we find that, to-day, industry is highly organized and extremely complicated. This change has been **Inventions: Their importance.** wrought by the Industrial Revolution of the latter half of the eighteenth century. In effecting this change, inventions have been of paramount

importance. In fact, without the inventions of the last one hundred and sixty years, men would still be working singly and inefficiently. Modern industry is founded on inventions. Through them machinery has come to the aid of man, who has learned that, by working coöperatively with the help of machinery, industrial miracles may be accomplished. Steam and electric power are slaves, willing and eager to do the work of man. Inventions are the means whereby man directs and utilizes these forces of nature.

The effect of inventions may be seen chiefly in three directions. In the first place, through inventions, *Their effects.* mechanical power has been utilized to direct industry. Man's physical strength is infinitesimal. Mechanical power was therefore applied to the wheels of industry. A series of famous inventions, beginning with the work of Hargreaves, Arkwright, and Watt, first taught man how to apply the forces of nature to the field of industry. Water power, steam, and electricity, each in succession has been substituted for human energy. To-day we even witness the harnessing of Niagara Falls, and the almost miraculous utilization of the vibratory forces of nature.

Inventions have, in the second place, revolutionized means of communication. As soon as men discovered that the wheels of industry could be driven more cheaply and efficiently by mechanical power than by human energy, they applied this knowledge to improving their transportation facilities. The increased supply of economic goods could thus be transported cheaply between distant places. The development of the railway, the telephone, the telegraph, the trolley car, and the commercial automobile

have all contributed vastly to industrial development. In the future the possibilities of the airship are yet to be realized.

Inventions have finally exercised a wonderful influence on labor. The Yankee is noted for doing nothing by hand that may be done more quickly or cheaply by machinery. As a result, more labor-saving devices have been invented in the United States than in any other country. Examples of such machinery are found everywhere. In lifting and carrying heavy masses of iron and lumber, great cranes now do the work once done by human muscles. The old hand press of Benjamin Franklin's time has been replaced by the huge printing machines of the present day. By the invention of labor-saving machinery, the Yankee has caused his head to save his hands.

The logical outcome of these new conditions brought about by inventions was the advent of the "factory system" of industry. It has already been pointed out that during colonial times American industrial methods and processes were simple and easily performed. The home was the seat of industry. Here was done the work of spinning, weaving, and cloth making. But, with the advent of the new inventions of the latter half of the eighteenth century, industry required entirely new conditions. Complicated machinery could not be installed in the home; it must be separately housed in the factory. Things were thus no longer hand-made and home-made, but machine-made and factory-made. Labor, too, instead of consisting of a small family group was now made up of great groups in large factories. In this manner, the nineteenth century witnessed the development of the factory system of industry.

The "factory system":

Its essential features.

The advantages of this system are seen primarily in the production of wealth. The great quantities of goods produced by the factory make possible a decrease in the cost of manufacturing. In contrast to agriculture, which is subject eventually to the law of diminishing returns, manufacturing is subject to what is known as the law of constant returns. That is, the value of the product turned out increases, more or less regularly, with the cost of manufacturing. If, then, the cost of production can be reduced, while the demand for the product remains the same, the possibility of providing goods more cheaply becomes steadily greater. Inventions, by eventually reducing the cost of production, especially in the field of labor, normally result in a larger, cheaper, and better output of goods.

From the standpoint of consumption, the advantages of the factory system are no less evident. Things which were formerly produced in the home with great care and expense are now supplied by the factory. Hosiery firms in one week turn out ten thousand dozen pairs of stockings, while factories deluge the housekeeper with manufactured breakfast foods and canned fruit. Because the factory can do all this more cheaply than the home, man's consumption has become more varied.

The factory system of industry has some disadvantages also. These were felt chiefly in the period of transition, when large numbers of skilled laborers were forced out of work by the introduction of machinery. However, after an adjustment to the new conditions had been effected, this evil was in part removed. A more present evil is found in the fact that individuals, living and working under the factory system, are subjected

to the harmful conditions imposed by that system. In this connection attention has already been called to the evils of child labor, to the danger from unguarded machinery, from dust, high temperature, and lack of ventilation. Then, too, the massing of laborers in large cities near factories presents a serious problem. But after all, these conditions are transitory and may in the course of time be remedied.

QUESTIONS FOR RECITATION

1. Explain the kinds of industries open to the colonists.
2. Why did they wish to develop secondary industries?
3. What was the English colonial policy and how was it carried out?
4. Was this policy beneficial to England? To the colonies? Why?
5. Were the colonists justified in objecting to the British restrictions on their manufacturing and commerce?
6. Had the American manufacturers no alternative, in 1789, but to ask for a protective tariff? Does this necessity exist to-day?
7. Explain the effect of the War of 1812 upon American industries.
8. Explain the domestic system of industry. Can you cite any instances of this to-day?
9. Describe the origin of the factory system. Explain its meaning.
10. Discuss the importance and the effects of inventions to society.
11. Describe the advantages of the factory system.
12. What are the chief evils of the factory system?
13. Can the evils of the factory system be separated from it? If so, how?

PROBLEMS FOR DISCUSSION

1. Contrast the economic with the political causes of the Revolutionary War.
2. What important influence did the division of industries —

agriculture in the Southern, and manufacturing and commerce in the Northern colonies — have upon the later history of the United States?

3. Can any parallel be drawn between the English colonial policy of 1700 and the American colonial policy of 1900?

4. Was Hamilton correct in assuming that a nation should be self-supporting through the production of all the necessities of life?

5. What factors made possible the rapid advance of American manufactures after 1815?

6. What advantage had the early American over the European manufacturer? What disadvantage?

7. Where do the benefits of inventions go? Explain fully.

8. What is the most effectual way of encouraging inventors?

9. Is the factory system essential to civilization? Why?

10. Are there any ways in which the factory system may be superseded?

11. Has the increased amount of goods produced under the factory system made up for the loss, individually, which has been the lot of many?

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CHAPTER XXVI

LARGE SCALE PRODUCTION

- I. Nature of large scale production
 1. Its meaning
 2. The old method
 3. The present method :
 - a. An illustration
 - b. Its essential features
 - c. How it has spread
- II. Effects of large scale production
 1. The advantages :
 - a. Decreased cost of production
 - b. Control of the product
 - c. Utilization of by-products :
 - (1) Meaning
 - (2) Examples
 - d. Specialization in industry
 2. The disadvantages :
 - a. Economic
 - b. Political
 3. Other effects :
 - a. On labor
 - b. On capital
 4. The conclusion

Nature of Large Scale Production. — The logical outcome of the factory system is the system of large scale production. This system is applied to that ^{its} modern method of production which involves ^{meaning.}
(1) the use of colossal sums of capital, (2) the highest

efficiency of labor secured through complete organization and perfect equipment, and (3) the control of the resources necessary to the production of the finished article. When the factory system first developed, production was accomplished in a comparatively simple manner, and for that reason was known as small scale production. But with the marvelous machinery and the perfected methods of recent years, modern production has entered upon a large scale stage.

Consider, for example, in the iron industry, the difference between the methods employed in the last century and those used to-day. When iron ore was discovered in the Lake Superior region, after the iron industry had been centered at Pittsburgh, the manufacturers of iron wished to transport the ore to the coal district. To accomplish this, steamboats were employed to carry the ore down the Lakes to a point near Pittsburgh; and then the ore was taken from the boats by means of hand tools, such as shovels and wheelbarrows. This simple method of performing the work was known as small scale production.

In contrast to this to-day we have the methods of large scale production. The ore, dug from the ore fields with steam shovels, is hauled to the lakeside and emptied on a high wharf. From this wharf the iron ore is dropped through chutes into the hold of an ore ship, which then proceeds to the lower Lake ports. Here special electrical machinery operates huge grab-buckets, which drop into the hold of the ship, grab from six to ten tons of ore at once, and transfer it to the cars waiting to convey it to Pittsburgh. By means of these grab-buckets, ten thousand tons of ore

**The old
method.**

**The present
method:**

An illustration.

can be transferred from the vessel to the cars in a few hours. In all these processes it will be observed that crude machinery and muscular energy have been replaced by highly perfected mechanical appliances.

But these appliances are not secured for nothing. The unloading plant itself costs a quarter million dollars, — a sum greater than that represented by the *Its essential* entire plant of the small scale producer. Large *features.* scale production, therefore, necessitates not only the most modern machinery and the most scientific methods of production, but it further necessitates the vast sums of capital required for these purposes. Again, this production cannot be carried on without an army of industrial workers with a highly perfected organization. Finally, the large scale steel producer requires control of the basis of his industry, — the raw materials of coal and iron.

The development of large scale production in the United States from the last quarter of the nineteenth century has been phenomenal. By no manner of means *How it* has this method been confined to the iron and *has spread.* steel industries. On the contrary, it has spread to the production of oil, of sugar, of tobacco, of foodstuffs, of electrical appliances, of locomotives, of ships, and indeed of practically all the leading industries of the country.

Effects of Large Scale Production. — This system of production has had a marked effect upon the industrial life of America. Its consequences have been both advantageous and disadvantageous, with the balance in favor of the benefits derived from this system of production. Foremost among these benefits is the possibility of decreasing the cost of production. We have seen that the natural con-

Advantages:
*Decreased
cost of pro-
duction.*

sequence of the factory system was to decrease the cost of production by reducing the amount, and, therefore, the cost of the skilled labor required under the old domestic system of industry. Large scale production, which is based upon the factory system, has greatly accentuated this tendency to reduce the cost of production by securing greater standardization in industry, by increasing the number of labor-saving devices, and by enlarging the economies of production. It must be remembered, however, that decreased cost of production is not synonymous with lower prices. This distinction will be further emphasized in discussing the evils of this system of production.

Large scale production decreases cost of production, not only through the use of improved machinery, but also through the control of raw materials, the utilization of by-products, and the specialization of industrial processes. In the first place, this system of industry aims to place in the same hands the control of the product from the time it is raw material until it has been converted into a finished or semi-finished product. This fact may be well illustrated by the development of the Carnegie Steel Company. Andrew Carnegie, who originally controlled a small steel mill, wished to own also the raw materials, — ore and coke, — as well as the means of transporting them to his works. He therefore proceeded to secure control, successively, of the Frick Company's coal and coke; of extensive ore fields in the Lake region; and, finally, of certain transportation lines running into Pittsburgh. In this manner, the Carnegie Steel Company secured control of steel from the ore bed to the finished rail. Since the result of this integrating

*Control
of the
product.*

process is to develop a tendency toward monopolization of natural resources, the consequences of this policy, if pursued in an anti-social manner, may be disastrous to society. However, when the interests of the community are properly safeguarded, the ultimate effect of integration in industry is advantageous to society.

Another striking advantage of large scale production is found in its utilization of by-products. By-products are the waste of industry, which by special processes are converted into economic goods. In *Utilization of by-products.* the packing houses of the West, for example, bones are made into many useful articles; fats provide glycerine for the preparation of soap and toilet articles; and the gray matter of calves' brains is turned into medicine for the treatment of nervous diseases. Through the aid of by-product utilization, the great Western packer is enabled to sell his main product at a price lower than that charged by his competitors, and, thereby, secure partial monopoly of his business. When the power of the large scale producer is used in this manner, it takes the form of "unfair competition."

Other industries effect similar savings. Slag, or waste from iron furnaces, is now made into high-class brick. "Buckwheat" and "dust" coal were formerly thrown away as refuse after the larger sizes had been screened out. To-day, however, this coal is utilized in the production of steam. Perhaps the best-known utilization of by-products has come with the development of the cottonseed oil industry. In 1860, cottonseed was garbage; in 1870, fertilizer; in 1880, cattle food; and in 1890, table food. Such striking transformations make us wonder what the future may bring forth.

Still another great advantage resulting from large scale production is found in specialization in industry. Although large scale production has brought a large number of plants under one management, this centralization is resulting in each plant's specializing in the manufacture of some particular product. For example, in manufacturing blacksmiths' supplies, one factory makes horseshoes; another, horseshoe nails; a third, drills; and a fourth, bolts and nuts. In this manner industry is being constantly specialized; and, of course, along with this industrial specialization and minute subdivision of labor, great economies of production have been effected.

Large scale production thus involves the possibilities of many advantages to civilization. However, as is usual with great contributions to industrial development, this system of production is at times accompanied by serious disadvantages to society. These evils may be economic, political, or social in character. On the economic side, the benefits resulting from the decreased cost of production, made possible by large scale production, may be enjoyed, not by the community in the form of lower prices and higher wages, but by the great producers in the form of higher profits and lower wages. This situation is brought about by the unchecked monopoly power of the large scale producer, by means of which he may be permitted deliberately to crush his competitors.

From the social and political standpoint, large scale production may result in equally potent evils to social welfare.

An enormous amount of wealth, concentrated in the hands of a relatively small number of individuals, gives this group of men extraordinary power over

the community. This power may be used for the benefit or for the detriment of society. For example, by means of this power, large scale producers may secure "special privilege" from the constituted authorities, and thus form what has been called a "corrupt alliance between business and politics." To overcome these evil possibilities, society must be constantly on guard to check the growth of corporate monopoly power.

Some other consequences, which have made a deep impress upon our social life, result from the system of large scale production. In the first place, men do not produce finished goods. This result was, of course, first brought about by division of labor, but the great specialization of large scale production has rendered this all the more inevitable. Formerly a man made a shoe, or a hat, or a coat. To-day he performs but one operation required in the productive process. For example, a man may simply polish the oil cups of locomotives, which are eventually used to haul food across the continent for his table. He no longer produces food, but directs his labor toward the performance of one ordinary operation. This change has resulted in labor's being highly specialized and organized in the form of a great industrial army.

On the other hand, the effects of this system of large scale production have been felt perhaps even more in the organization and management of capital. The old, simple methods of doing business are rapidly disappearing. Formerly a man with a small amount of capital engaged in business independently; to-day he becomes one of a thousand all engaged in large scale production. The small, single-handed capitalist has been re-

Other
effects:
On labor.

On capital.

placed by the huge, coöperative corporation, which is the form of business organization necessitated by large scale production.

Whether the benefits of large scale production are to accrue to society collectively, or to men individually, will depend altogether upon the relation maintained between the large scale producer and the community politically organized, that is, the government. If society permits large scale production to be carried on by powerful groups of individuals without regard to the public interest, the benefits of this system will be confined to the few who direct its operation. If, on the other hand, the government maintains, through properly constituted authorities, a wise supervision and a sound regulation of the activities of the great giant producers, the welfare of society will be promoted and the interests of the producers safeguarded. Like the factory system, the advantages of large scale production are permanent and increasing, while the disadvantages are transitory and remediable.

QUESTIONS FOR RECITATION

1. Describe the evolution of large scale production.
2. What is the relation between the factory system and large scale production?
3. Give the chief characteristics of large scale production.
4. Contrast the methods of small scale production with those of large scale production.
5. Give ten illustrations of large scale production in American industry.
6. Enumerate in outline form the effects of large scale production.
7. Explain how this system of production decreases the cost of production. Does it necessarily lower prices? Why not?

8. Show the effects of this system upon the control of natural resources. Give examples.
9. What is the relation between large scale production and the use of by-products? Give examples.
10. Does the saving through by-products always benefit the consumer? Why not?
11. Show the relation between large scale production and specialization in industry. Explain the effect of this upon labor.
12. What effect has large scale production had upon capital?
13. Explain the economic evils resulting from large scale production.
14. Describe the political effects of large scale production.
15. Show clearly how the economic evils of large scale production may be overcome.
16. How may the political evils be remedied?

PROBLEMS FOR DISCUSSION

1. What effects have inventions had on large scale production?
2. Are the advantages of large scale production an integral part of, or are they merely incidental to, this system of production?
3. Could modern society exist without large scale production? Explain.
4. Discuss the economic effects on China of introducing a system of large scale production.
5. Discuss the importance of by-products to modern industry.
6. What has been the chief cause of the utilization of by-products?
7. Are the advantages derived by the public from large scale production more important than the disadvantages? Why?
8. Is it likely that large factories will ever be devoted to portrait painting? Give reasons.
9. For which of the following articles is large scale production appropriate: hand-made shoes; machine-made shoes; furniture; nails; cut glass; orchids; millinery? Tell why in each case.
10. Do you understand that all business is destined to become large scale business? Give original illustrations.
11. Show how large scale production may result in the monopolization of natural resources. Give examples.

12. Show the limitations of government regulation of large scale production.

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CHAPTER XXVII

BUSINESS ORGANIZATION

- I. The usual forms of organization
 1. The enterpriser
 2. The partnership :
 - a. Its advantages
 - b. Its disadvantages
 3. The corporation :
 - a. Its nature
 - b. Its advantages :
 - (1) Great capital
 - (2) Limited liability
 - (3) Good management
- II. The trust form of organization
 1. Its nature
 2. Its different forms :
 - a. The "pool"
 - b. The board of trustees
 - c. The holding company
 3. Its regulation :
 - a. Why necessary
 - b. How attempted :
 - (1) Sherman Anti-trust Act
 - (2) Clayton Anti-trust Act
 - (3) Federal Trade Commission
 - c. Influence of Supreme Court
 - d. The outlook

The Industrial Revolution, from the domestic system to the culmination of the factory system in large scale

production, is reflected in the world of business organization in a series of changes in industrial management. In fact, so important has this element of management become in modern industry, that it is now regarded as a new unit or factor of production. However, when this element of management is so regarded, it must be looked upon as a composite factor of production, that is, as a union of two or three of the original requisites of production — land, labor, and capital — upon which all wealth-producing operations depend.

Usual Forms of Organization. — It was customary for many years past for business to be conducted and organized on a purely individual basis. A single employer took charge of the enterprise, furnished the land, labor, and capital required for the undertaking, assumed the risks involved in the transaction, and suffered the loss or reaped the profit according to the outcome of the project. In fact, this method is still pursued to-day by the independent business man who ventures out upon an industrial undertaking. Because he undertakes the full responsibilities of the business, he is called an enterpriser. Curiously enough he is found in both extremes of business. He may be a humble peanut vendor, a struggling boot-black, or an organizing manager of a great capitalistic business that reaches out into every state of the union. In the former case, however, he furnishes his own capital and labor; while in the latter case he relies, at least in part, upon the capital and labor, as well as the natural resources, of others who have intrusted the management of these business elements to his care and guidance. In order to give this enterpriser a distinctive name, the term “entrepreneur” has been applied to him.

When the factory system became firmly established it was soon demonstrated that the best results from business undertakings were not obtainable from the old-fashioned organization of business under a single employer. Hence arose the partnership form of business organization in which two or more individuals enter business together. The single employer is replaced by two, three, or more men who jointly and severally conduct the business, sharing its gains and losses. This method of doing business has a double advantage. Not only is the capital increased, but the work also is more efficiently performed by reason of the fact that each partner is able to specialize in some particular direction.

The partnership:
Its advantages.

On the other hand, the partnership has two serious disadvantages. The first of these lies in the fact that each partner is responsible, up to the value of his personal possessions, for all debts contracted by the other partners in pursuance of the business. A further disadvantage of the partnership is the limited amount of capital it controls. Although the amount is usually greater than that which a single business man commands, yet it falls so far short of the needs of modern times that other forms of business organization were devised.

Its disadvantages.

Therefore, to meet the necessities of large scale production, the industrial corporation came into existence. A corporation may be defined as "an association of individuals, known as stockholders, who are empowered by legal charter to elect annually a board of directors, and through it to act as one person in the conduct of the specified business." The corporation is thus a legal entity, existing only in the eyes of the law. Although it is an artificial creature, it possesses many

The corporation:
Its nature.

attributes of natural persons. For example, it has power to sue and to be sued; to hold, purchase, and convey real and personal estates; to appoint officers and agents; and, above all, it is empowered "to have succession, by its corporate name, for the period limited in its charter, and when no period is limited, perpetually." This last feature of continued existence is extremely valuable to the corporation because dependence upon the life of an individual enterpriser, or partner, creates a most undesirable instability.

Aside from its permanent character, the corporation, as a form of business organization, possesses other advantages. Chief among these is its ability to amass a great sum of capital. Thousands of individuals, through their purchase of stock in the corporation, contribute millions to its capital. This feature has already been referred to in connection with the effect of large scale production upon capital.

The ability of the corporation to raise capital depends largely upon the principle of limited liability. According to this principle, stockholders are liable for the debts of the company only to an amount equal to the par value of their stock. If the business fails, therefore, a single stockholder can lose only the value of his stock. The exception to this general rule is in the case of national banks, where the liability is double the amount of the par value of the stock subscribed.

The corporation also possesses advantages from the standpoint of the management of its business. This form of business organization secures flexibility. Through the simple process of a stockholders' election a complete change in the management may be effected. Likewise, through the offer of high salaries, the corporation is able to secure the

services of efficient men far beyond the reach of smaller concerns. Finally, the economies of large scale production, made possible by the resources of the corporation, constitute perhaps the greatest advantage of this form of business organization.

Trust Form of Organization. — Just as the partnership was superseded by the corporation, so the single corporation has been superseded in many fields of activity by a still larger unit of management, the *Its nature.* trust. The trust, like the corporation, is a form of business organization devised to meet a definite economic need. Since it has taken on different forms, the trust is not capable of exact definition. However, it may be said to be a combination of corporations, and to have passed through three stages of development.

The first form the trust assumed is popularly known as the "pool." In this form, independent producers in any one line of business make agreements to eliminate *Its forms:* competition among themselves, either by restricting *The "pool."* output or by fixing prices. This form of combination originated with railway companies. The pool is so named because, under such an arrangement, the receipts of the various companies are put into a common fund or "pool" and divided among them in a proportion already agreed upon. Not only has this system proved weak by reason of the outbreak of mutual jealousy and distrust, but such agreements have also been declared illegal.

Therefore, the trust entered on its second stage of development. In this stage the various competing corporations turn over their stock to a central board of *The board of trustees.* trustees, which hands back "trust certificates" in exchange. This board, holding a majority of the stock

of the various constituent companies, maintains complete harmony among the companies and regulates output and price. This is the "trust" in the technical sense. It has been declared illegal.

The third form of the trust, devised because the "trustee" trust was outlawed, is known as the holding company. Under the holding company plan, each corporation entering the combination maintains its separate existence. To secure unity of action a central corporation is formed, empowered to hold stock of other corporations. The stock of the parent company is then exchanged for the stock of the various constituent corporations. This places under one central control the voting power of the stock of all combining companies, thus insuring uniformity of action and the maintenance of prices. This third stage resembles, in effect, very much the second, except that a board of trustees is illegal, and a corporation empowered to hold stock of other companies may or may not be illegal.

The holding company, then, is the present form of business organization adapted to the needs of large scale production. But we have seen that this system of production sometimes enables the few men who organize it to exercise enormous power over the community through their control over natural resources and their possession of vast sums of capital. By means of their monopoly power, the trusts are sometimes enabled to appropriate to themselves the benefits of large scale production by raising prices, limiting output, and by otherwise controlling production. Hence, to attain social welfare, it is necessary to exercise some form of public control over the trust organization of industry. At first,

Its regulation:

Why necessary.

the states attempted to exercise this regulation. In 1889 Kansas took the lead by passing a law against business corporations, and was soon followed by other states in the movement to curb the power of the trusts. These laws usually struck at all combinations, regardless of whether they formed complete or only partial monopolies. They were so drastic in character that they were often declared unconstitutional. Furthermore, the laws of the different states conflicted in their provisions. But above all, state action proved inadequate because of the limited power of the states. In our dual system of government, the federal government alone has power over interstate commerce; and it is chiefly in this kind of commerce that the great corporations are engaged. Not state, but federal regulation, therefore, became imperative.

In 1890 the demand for federal action became so general and insistent that Congress passed the Sherman Anti-trust Act. According to this act "every con- *How at-*
tract, combination in the form of trust or other- *tempted.*
wise, or conspiracy, in restraint of trade or commerce among the several states, or with foreign nations" is declared illegal. Furthermore, this act makes it a misdemeanor for any person "to monopolize, or attempt to monopolize, any part of the trade or commerce among the several states, or with foreign nations." To make effective this measure, the federal courts are given jurisdiction in these matters. This act is so sweeping in its terms that it has been held to apply not only to industrial combinations, but also to railway combinations and labor unions. In fact, the language of this act is so inclusive as to render difficult its exact interpretation.

In 1914, however, the passage of the Clayton Anti-

trust Act modified and made clearer the terms of the original Sherman Act. This later act exempts labor unions from the provisions of the Sherman Anti-trust Act, prohibits one corporation from acquiring stock in another corporation with the purpose of substantially lessening competition between them, and makes illegal, under certain conditions, the system of interlocking directorates.

In the same year, 1914, Congress established the Federal Trade Commission, composed of five members appointed by the President. This commission is not only endowed with large powers of investigation, but it also has the power to require special reports from interstate corporations whenever it believes such action is necessary to the public welfare. It may, upon the request of the Attorney General, investigate the activities of corporations that are suspected of violating the anti-trust laws, and make proper recommendations for the reorganization of their business. It facilitates the operation of the Sherman and the Clayton Anti-trust Acts by providing new and more effective methods of procedure. In this manner it is hoped that any tendency to monopoly will be checked in its early stages.

In the last analysis the legality or illegality of the so-called trust, that is, the holding company, depends upon the decision of the United States Supreme Court.

*Influence of
Supreme
Court.*

In 1910, this court handed down two vital decisions ordering the dissolution of the Standard Oil Company and the American Tobacco Company. In these cases it was conclusively proved that these corporations were guilty of practices designed to secure a monopoly of trade and commerce in their respective industries. Through unfair competition and unreasonable restraint of

trade, these combinations had developed, in their particular fields, a monopoly with power to fix prices, limit output, and determine quality. The legality of the industrial combination, therefore, is to be tested on the basis of monopoly. If the effect of the combination is to create such a monopoly, it is illegal; if the effect is otherwise, the combination is legal. This point of view was carried out to its logical conclusion in the decision of the Supreme Court in 1920, dealing with the United States Steel Corporation. Here the court held that the so-called "Steel Trust" is not a combination in restraint of trade, because, in spite of its size, it does not form a monopoly of the steel business, and it is therefore declared to be legal.

Thus it is possible for certain combinations to be declared illegal, and for others to exist within the law. When one form of business organization is declared illegal, another in harmony with the law will be *The outlook.* devised, because large scale production appears to be a necessary part of modern industrial civilization. The process of evolution is at work in industry as well as in society; and large scale production is one of its products. This does not mean, however, that a trust organization of industry need develop at the expense of social welfare. It merely means that, through proper legislation, the economies of large scale production and the benefits of monopoly, whenever they exist, should be appropriated by the community as a whole rather than by any one group of individuals. If it is true that large scale production is a stage of industrial evolution, it is useless to attempt to stifle it, and it is inimicable to social welfare to allow it to develop free of all social restraints. Both the interests of the producers and the interests of the consumers must

be properly safeguarded by effective legislation. Perhaps the best method of accomplishing this end may be attained through industrial commissions which represent the interests both of the individual and of society.

QUESTIONS FOR RECITATION

1. Explain the importance of the element of management, or business organization, in modern enterprises.
2. Is managing ability an original or composite factor of production? Why?
3. Describe the simplest method of conducting business. What name is applied to this method? Why?
4. Are the following entrepreneurs: a cobbler, a farmer, a consulting engineer, a banker, a railroad builder, the boss of a section gang? Tell why in each case.
5. What is a partnership? What are its advantages and disadvantages?
6. Define a corporation. Why has it been called an "artificial person"?
7. Explain why the corporation is an advantageous form of business organization.
8. What is a trust? Why must the definition be general in nature?
9. Explain the difference between the "pool" and the "board of trustees."
10. Explain how the holding company differs from either of the above forms of business organization.
11. What is the purpose of forming a holding company?
12. Explain clearly why it is necessary to control or regulate the trusts.
13. Name the acts by which this regulation is attempted. Give the chief provisions of each.
14. Explain the work of the Supreme Court of the United States in this direction.
15. What is the present form of the trust? When is it legal? When is it illegal?

16. What happens when the court orders the trust to dissolve?
17. Do you believe that the trust organization of industry can be abolished? Explain your answer.
18. If not, what effective remedy do you suggest for the control of the trusts?

PROBLEMS FOR DISCUSSION

1. Name the different forms of business undertaking. Discuss them from the standpoint of their relative strength and weakness.
2. What are the chief points of difference between a corporation and a partnership?
3. What advantages has a corporation as compared with a partnership? Are there any respects in which a partnership has advantages not possessed by a corporation?
4. What is a holding company? What are the advantages afforded by this form of organization?
5. Is the growth of combination in accord with economic law? Why?
6. Is the movement toward combination still going on? Is it likely to continue in the future?
7. Are all trusts monopolies? Are all monopolies trusts?
8. What social advantages and disadvantages do you see in the trusts?
9. Is there likely to be a world corporation formed, or a "great trust" in which every one will be a shareholder?
10. What are the arguments for and against full publicity?
11. On what basis should the amount of capitalization of a trust be determined?
12. What are the checks on the power of monopolies to raise the prices of their products?
13. What advantages and disadvantages do you see in monopoly?
14. Would the abolition of the tariff result in the disappearance of the trusts?
15. Name some of the tendencies in the organization of natural resources.
16. Name some indications of increasing governmental activity in business.
17. State the conflicting views regarding the trust.

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CHAPTER XXVIII

THE INDUSTRIAL ARMY

I. Labor coöperation

1. The stages of coöperation :
 - a.* Simple coöperation
 - b.* Division of employments
 - c.* Division of labor
 - d.* Specialization in industry
2. Advantages of coöperation :
 - a.* Concerning the product
 - b.* Concerning machinery

II. The army of workers

1. The organizer :
 - a.* Policies and subordinates
 - b.* Markets and methods
2. The manager
3. The foreman
4. The wageworker :
 - a.* The skilled worker
 - b.* The semi-skilled worker
 - c.* The unskilled worker
5. The conclusion

The change in business organization brought about by large scale production has been accompanied by a similar development in the organization of labor. Formerly, industrial effort was largely individual and competitive; to-day it is almost altogether social and coöperative.

Labor Coöperation. — In the days of savagery, comparatively little industrial work was performed. The

men fought, hunted, and fished, while the women took charge of the primitive industries. Gradually, however, **its stages:** military coöperation led to industrial coöperation. Men who had worked together to kill a bear **Simple co-operation.** resorted to the same method in throwing logs across a stream. Although no task was assigned to definite individuals, each man helped the other by taking part in the operation. This stage in the development of labor is described as simple coöperation.

But simple coöperation at best is unsatisfactory. Some men like to do one thing better than another; hence the development of the second stage of labor coöperation known as the division of employments. In this stage, one group kills game, another builds boats, while the women carry on agriculture or weave cloth. Each produces a finished product, which is exchanged for the product of some other group, and thus a certain degree of interdependence runs through early society.

The next step in labor coöperation is division of labor. Formerly, in building a house one man would perform all the parts of that operation. He would go into the woods, fell the trees, and build the house. But gradually the different kinds of labor involved in the task of house building were divided among several individuals. One man would simply fell the trees; another cut them into logs; another haul the lumber; and another build the house itself. In this case several men coöperate, but each performs a different part of the labor.

Finally, this simple division of labor becomes complex through what is known as specialization in industry, — the fourth and present stage of labor coöperation. By means

of this principle of specialization, each part of the labor already divided has again been further subdivided in the various processes necessary for the finally perfected operation. For example, in the above illustration, the man who chopped down the tree

Specialization in industry.

— one part of the labor — was provided with an ax which was the result of the labor of scores of workmen, each one of whom performed some particular part in the process. In this manner, modern methods of production have resulted in minute subdivision of labor and great specialization in industry. Coöperation has made this possible.

By means of this form of labor coöperation, the product is not only increased in quantity, but improved in quality. Persons who coöperate in labor learn intimately the special tasks they perform. Each one is able to do his work much more effectively, therefore, than he would be able to perform work involving a large number of separate operations. For this reason, a hundred socially organized workers in a shoe factory are able to turn out more shoes and better shoes than a hundred individual shoemakers.

Advantages:
Concerning the product.

Another great advantage of this kind of coöperation is found in the fact that it makes possible the increased use of machinery. When an involved operation, like shoemaking, has been minutely subdivided into forty or fifty operations, the rougher work may be done more quickly and more cheaply by machinery than by human hands. Thus, the sewing machine, stitching through heavy leather, accomplishes a speedier and better result than the individual hand worker. In this manner, man's inventive genius develops labor-saving machinery to take the place of human energy. It is this high special-

Concerning machinery.

ization in industry which furnishes the opportunity for man to invent and develop the machinery required for the special processes.

The Army of Workers. — To-day, as a result of this high specialization in industry, all modern industrial labor is coöperative. The American labor force is thus highly organized from top to bottom in the semblance of an industrial army. At the head of this army of workers is the organizer, — the commander in chief of his particular industry. Like the military commander, his duties are to determine broad policies and to intrust their administration to competent hands. The great organizer mobilizes the forces of labor and capital and applies them to natural resources in such a way that the smallest outlay produces the largest return. He is an executive and leaves all details of administration to his subordinates, for whose competency he is responsible. It is to his creative genius that we owe the trust organization of American industry, and to him has been applied the phrase "Captain of Industry," as well as the term entrepreneur.

The organizer must also have an intimate knowledge of the general markets. He must know what goods are in demand, and where and when this demand is most active; that is, where prices are highest. He must likewise have a thorough knowledge of industrial processes and methods of production, so that by-products may be fully utilized and large scale production carried on efficiently.

Next to the organizer in this industrial army is the manager. Like the colonel of a regiment, he executes the orders and carries out the plans of his superior officer. The manager,

therefore, must be in closer touch with the details of the business. While the organizer directs from his New York office the policy of a whole group of establishments throughout the country, the manager is responsible for the successful management of only one of these plants. He must understand not only the local labor market, but also the possibilities of capital in his particular branch of industry. It is his duty to bring these two together so that he may secure the greatest possible production.

Below the manager is the superintendent, foreman, or "boss," corresponding to the captain, lieutenant, or corporal of a military organization. It is the duty of the superintendent to see that the men do the work that the manager has outlined. He is responsible for the management of his department, and for getting all the work possible out of the group under his charge. The foreman, as well as the "boss," requires special ability to get along with the laborers, and to persuade them or compel them to work effectively. In the past, the Irish have made the best "bosses," but Italians and Slavs are now being used to direct the work of their own countrymen.

We now come to the ordinary workers themselves, — the rank and file of this industrial army. Just as the successful execution of a general's orders depends, in the last analysis, upon the bravery and power of the great mass of soldiers, so the real test of a nation's efficiency is found in the ability and character of its great body of **wageworkers**. For convenience, the **wageworkers** may be divided into three groups, — the skilled, the semi-skilled, and the unskilled. The skilled worker is one who does work that requires a

longer or shorter period of training or apprenticeship. In this class are included the typesetter, the blacksmith, the carpenter, the skilled clerk and bookkeeper, and a host of others who have received more or less special training in their respective lines of work.

The semi-skilled worker is one doing work that may be learned with comparative ease by any newcomer who has ordinary intelligence and ability. Although it is

The semi-skilled worker.

hard to give an accurate definition of the semi-skilled wageworker, the number of men in this class is quite large. For example, in this group are included the miner, the brakeman, the motorman, the mechanic's helper, and numerous other laborers doing work which requires some little skill and intelligence, but no particular period of apprenticeship.

The unskilled worker represents a maximum of physical force and a minimum of mental capacity. The street

The unskilled worker.

laborer, the coal heaver, and the ditch digger are representatives of this class. The number of laborers in this group rapidly increased in the nineteenth century by reason of two circumstances. In the first place, thousands of immigrants to this country, who were unable to speak the English language, were forced into the ranks of unskilled labor regardless of their native ability. In the second place, the rapid introduction of machinery often deprived a skilled worker of his regular labor and forced him temporarily into the lower ranks, so that he was obliged to attend to the machine which displaced his own skilled labor.

Large scale production has left as deep an impress upon labor as upon capital. This twofold aspect of modern American economic life presents some of the most strik-

ing problems of individual and social welfare. Through coöperation, industrial efficiency has been secured and economic progress attained. This same principle must be utilized to attain individual welfare and prosperity in the rank and file of the great army of industrial workers. The conclusion.

QUESTIONS FOR RECITATION

1. Trace the development of labor coöperation.
2. Is it true that primitive man made woman do all the work? Explain clearly.
3. Explain the difference between the second and third stages of labor coöperation, and give examples of this difference.
4. Show how specialization in industry differs from division of labor. Give examples.
5. Show the development of all four stages of labor coöperation in the construction of bridges from primitive times to the present day.
6. Show the effect of coöperation on goods; on inventions.
7. When industries were being organized on a trust basis, what new industrial leader arose? What are his distinctive duties? What service has he rendered to America?
8. Why is this leader sometimes called an entrepreneur? How does the entrepreneur differ from the single employer of a hundred years ago?
9. Explain the duties of a manager and his relation to the organizer. Is this term ever misused? How?
10. State the lower grades of officers in the industrial army and their duties.
11. Classify the rank and file of industrial laborers. Describe the characteristics, and give examples, of each group.
12. Describe in detail the organization of some enterprise with which you are familiar, conducted on the basis of large scale production.

PROBLEMS FOR DISCUSSION

1. What is the relation between labor coöperation and economic progress? Explain clearly; give examples.
2. Discuss the importance of labor coöperation in securing increased production.
3. Is labor coöperation increasing or decreasing in extent? How?
4. What is the relation between labor coöperation and large scale production?
5. Is modern labor coöperation voluntary? Explain.
6. Draw a diagram showing the organization of labor in modern industry.
7. What differences can be noted in the organization of labor in the early colonies and in the United States at the present time?
8. Is the organizer necessary to modern industry? Why?
9. What service has the organizer rendered America?
10. Is the supply of organizing ability limited? If so, by what?
11. Is the average school in America calculated to develop organizing ability? Explain clearly.
12. What is the relation between our school system and the wage-worker? How can it be improved?

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CHAPTER XXIX

TRANSPORTATION AGENCIES

- I. Railroad transportation
 1. Its importance
 2. Its rapid growth
 3. Centralized control
 4. Nature of the railroad business :
 - a. The railroad a monopoly :
 - (1) The reasons
 - (2) Consequent problems
 - b. The railroad a "quasi public" corporation :
 - (1) Receives public aid
 - (2) Possesses right of "eminent domain"
 - c. The conclusion
- II. Other transportation agencies
 1. The telegraph
 2. The telephone
 3. Express companies :
 - a. Their growth
 - b. Their regulation :
 - (1) Why necessary
 - (2) What the United States has done
 4. Electric traction :
 - a. Urban transportation
 - b. Rural transportation
 - c. Electrification of steam roads
 5. Water transportation
 6. Progress attained

Another distinct phase of American economic life appears in the development of transportation facilities. Foremost

among these facilities is the railroad ; but growing steadily in importance are other transportation agencies, such as the telegraph, the telephone, express companies, electric traction, and water transportation. Each of these demands separate consideration.

Railroad Transportation. — Railroad transportation has made possible the American nation. Politically, it has performed an inestimable service by bringing the
 Its im- portance. diverse parts of the union within easy reach of each other. To-day, the city of Washington is nearer to San Francisco than it was, in early days, to Boston. From an economic standpoint, the service rendered by the railroad has been no less profound. It has bound North and South, East and West into a gigantic economic unit, complete and self-sustaining in all important respects. This the railroad has accomplished by giving goods "place utility," that is, by transporting goods from one place where they are not needed to another place where they are in demand. The railroad has thus become the connecting link between the producer and the distant consumer. A sudden disturbance of this relationship would result in the paralysis of American economic life.

The growth of railroad mileage in the United States has been astonishing. In 1830 there were, in this country,
 Its rapid growth. only twenty-three miles of railroad ; in 1860 there were over thirty thousand miles ; in 1880, over ninety-three thousand miles ; in 1900, over one hundred and ninety-three thousand miles ; in 1910, two hundred and forty thousand miles, and in 1920, nearly three hundred thousand miles. This growth in railway facilities is without parallel in the economic history of any other people.

Accompanying this increase in mileage is the movement toward centralization of railroad control. Two hundred and ten independent roads, each with its own president, in 1883, had been consolidated, by 1907, into fifty or less. This movement toward centralization has been so rapid that, if it continues unchecked, it is not idle to speculate on the day when four or five men, sitting around a table, will control all the important track mileage of the country. At present sixty per cent of the mileage of the United States is under the control of five large interests. During the period of government operation, naturally all the important mileage of the country was under the control of one central authority.

The true significance of railroad concentration becomes apparent only when one considers the nature of the railroad business. The railroad is a partial monopoly; that is, it performs a service which few other agencies perform, the cost of which decreases with the increase in the volume of business. The initial cost of constructing a railroad is so great that, from a social point of view, it is an economic waste to construct another line to duplicate the work of the first road. Moreover, after the trackage, terminal facilities, and rolling stock have once been provided, an increase in the volume of business does not mean a corresponding increase in the expense of operation. In fact, the unit expense diminishes as the business increases, and the railroad therefore benefits by what is called the "law of increasing returns."

In spite of legal prohibition, railroads in the past have used their monopoly power unfairly. For example, the law declares that railroads, in transporting commodities, shall not discriminate between individuals, but shall offer

their services to all on equal terms. Nevertheless, because of the law of increased returns, the traffic manager is ever tempted to accept extra business at a lower rate. This conflict between railroad profits and public interests sometimes leads to a violation of the principle of equal rates for equal service, and has resulted in the practice of granting rebates to favored corporations.

Another distinctive feature of the railroad is its close dependence upon the government. This close relation between the railroad and the public has caused the railroad to become a "quasi public" corporation. In bringing about this situation two factors are chiefly responsible. In the first place, railroads from the earliest times have received financial aid from the states. In addition to this, the national government has not only advanced money, but also contributed thousands of acres of public land. Thus, railroads are especially indebted to the public, and are therefore clearly marked off from ordinary private economic activities.

But of even greater public significance is the railroad's right of "eminent domain." According to this right, a state, upon the payment of just compensation, may take private property for public use even against the will of the owner. To facilitate the railroad in performing its service, the state has delegated this right to the transportation company and thus endowed it with extraordinary power. Railroads are peculiarly indebted to the public, and those who manage them should pay especial regard to public welfare. They are not free to charge what rates they choose, to decide what sections of the country shall prosper, or what private interests shall thrive at the expense of the public good.

Besides the importance which it derives from its quasi public nature, the railroad business is of tremendous magnitude. According to statistics of the Interstate Commerce Commission in 1917 the labor employed in railroading numbered about 1,500,000; the capital invested approximated \$20,000,000,000; and the gross earnings amounted to \$3,000,000,000. Thus, in the number of laborers employed and in the amount of capital invested railroading is, next to agriculture, the greatest single business in the United States.

Other Transportation Agencies. — While the railroad is by far the most important transportation agency in the United States, there are other agencies which play a great part in promoting national prosperity and efficiency. Chief among these are telegraph, telephone, and express companies, which, together with electric traction, constitute an exceedingly important group of transportation agencies.

The telegraph developed along the lines of railway communication. With improvements in the railroad system, it became necessary to have some means of speedy communication, not only between railroad stations, but also between signal towers. Since the telegraph was the earliest means of instant communication, telegraph and railroad lines at first everywhere paralleled one another. With the opening of the present century, however, this community of interests was not always maintained.

During the last quarter of the nineteenth century, the telegraph met a keen competitor in a new device — the telephone. Unlike the telegraph, which was immediately used for long distance communication, the telephone at first was employed only to communi-

*The
conclusion.*

*The tele-
graph.*

*The tele-
phone.*

cate within buildings, or to communicate between places within the same city. Gradually, however, the sphere of the telephone was broadened, until, to-day, a conversation between New York and San Francisco is an ordinary occurrence. Despite the efforts of the telegraph companies to secure trade, through the introduction of the "night letter" and similar innovations, the telephone has largely supplanted the telegraph as a direct and effective means of short distance communication.

Of quite a different character is the transportation furnished by express companies. While heavy commodities are transported by freight, small packages require **Express companies:** a speedier, easier method of transportation. *Their growth.* Therefore, the express business was developed in the United States. Express companies developed side by side with the early railroads, until a strong community of interests arose between them, and a close identification of business relationships followed.

At first, the express business was organized locally and conducted by a number of separate companies. Soon, *Their regulation.* however, this business, while not under one formal unified control, was nevertheless combined into one great system operated on a business understanding so effectual that territory was divided and rates agreed upon without a sign of competitive spirit. As a result of this understanding, express rates in the United States at the opening of the twentieth century were very high.

As a means of obviating private extortion in the carriage of small packages, Europe was first to adopt the parcel post system. For a very low charge, the government carried packages of considerable size and thereby com-

peted with the private express companies. In the United States the private companies worked consistently, and, for a long time, effectively, against the passage of parcel post legislation. However, in 1913, after long-continued agitation, a parcel post law was finally enacted. The rates under this law were so low that in the following year the United States Express Company, a private corporation, was forced out of business.

The form of transportation which, recently, has had the most rapid growth is electric traction. While electric cars were operated during the last two decades of the nineteenth century, it was not until the very close of the century that the "boom" in electric traction began. Since that time financiers have turned their attention to electric traction operations.

The electric traction problem has three distinct phases, — urban transportation, rural transportation, and electrification of steam roads. The concentration of population in large cities has made the problem of urban transportation most acute.

Urban transportation.

While cities have grown greatly in extent, the business center has remained comparatively small. Therefore, the increased population of the outlying regions must have some means of rapid transit. With a maximum of speed and a minimum of expense in operation, the electric car offers by far the most effective means of transporting the city dweller to his place of work.

At the same time that street railways have been electrified and extended, inter-city and rural electric lines have been developed. As compared with steam roads, the cost of installing and operating such lines is small. Consequently, electric traction facilities have

Rural transportation.

been afforded sparsely settled districts where steam transportation would have been unprofitable. Furthermore, a steam road, requiring a comparatively level bed, necessitates heavy cutting and filling. On the other hand, an electric car climbs almost any hill, and the cost of grading is thus reduced to a minimum. Hence, the rural electric line reaches many points not accessible by the steam railway. In this manner, electric traction has proved a real boon to the country dwellers.

The third phase of electric traction — the electrification of steam roads now in use — has as yet barely begun.

Electrification of steam roads.

The New York Central road has electrified some suburban lines running out of New York City with gratifying results, while the Pennsylvania Railroad has begun the work of electrifying all its suburban lines. Since such electrification is profitable in cases of growing suburban districts, it is more than likely that, during the next few decades, all the suburban steam roads running out of the larger American cities will be electrified.

In considering agencies of transportation we must not overlook the possibilities of water transportation. In

Water transportation.

an earlier chapter we have already pointed out the unsurpassed system of waterways in the United States, and their great advantage to commerce because of the decreased cost of water transportation. The Panama Canal will prove to be especially stimulating to the American coastwise traffic, particularly if American ships engaged in this commerce are again accorded free passage through the Canal. Of even greater importance, however, is the question of a merchant marine. The World War gave to the United States a

merchant marine four times greater than it possessed before the outbreak of hostilities. It created for the American people a great ocean-going fleet of 10,000,000 tons at a cost of more than \$3,000,000,000. Whereas, in 1910, only eight per cent of the imports and exports of the United States were carried in American vessels, in 1919 nearly twenty-eight per cent of American foreign trade was so carried. The problem that confronts us is to maintain, and increase in the future, the American tonnage of ocean-going ships. This can only be done through some form of wise governmental action which will make it possible for the American shipbuilding industry to compete successfully with its European rivals.

The means of transportation are the arteries of American business and social life. At the opening of the nineteenth century, the American people traveled on land and water at the same rate that Julius Cæsar traveled centuries before. Since the Roman roads were so superior to our own, modern land transportation may have even been inferior to that of the ancients. But, during this one century, marvelous progress was made in the means and methods of transportation. Space and time were annihilated, distant places connected, goods and persons easily transported, and communication between distant places established. The future, too, holds out unknown possibilities for the automobile truck and the magic airship.

QUESTIONS FOR RECITATION

1. Explain the importance to the nation of the railroad (1) from a political standpoint, and (2) from an economic standpoint.
2. Trace the development of American railroads, both in mileage and in management, from 1880 to the present time.

3. Give the distinct characteristics of the railroad business, contrasting it in these respects with the manufacturing industries.
4. Explain clearly why the railroad tends to become a monopoly and the consequences.
5. Explain the meaning of the law of increasing returns.
6. Show why the railroad is a quasi public corporation.
7. Why has the state delegated the right of eminent domain to the railroad?
8. Is agriculture or railroading more important? Why?
9. Contrast the development, and the function, of the telegraph and the telephone.
10. Explain why it was necessary to regulate express companies, and what Congress has accomplished in this direction.
11. What are the three chief forms of electric traction? Explain why each is important.
12. Explain the importance of inland water transportation in the United States.
13. State the growth of the American merchant marine during the World War. Explain this growth. What do you think of its future possibilities?
14. Contrast present day methods of transportation with those of ancient times.

PROBLEMS FOR DISCUSSION

1. In what sense is transportation productive?
2. Why is transportation a greater and more difficult problem in the United States than in most countries of Europe?
3. How would the sudden cessation of all railroad traffic affect the life of the American people?
4. If there were no railroads, would there be any "trusts"?
5. If one person rides on a pass, who pays for that ride?
6. How does the Pennsylvania Railroad differ from a large department store in regard to its freedom in making rates or prices?
7. What effect has the prosperity of the railroads on the steel industry? Explain fully. On other industries?
8. Have American railroads in general followed or directed the course of settlement of the country? Why?

9. Would private capital have been invested in railroad building, if the chance of extraordinary gain had been greater in other industries? Explain clearly.

10. Are local famines likely to be as serious in China in the future as in the past? Why not?

11. Has railroad transportation relieved or aggravated the problem of congestion in great cities?

12. Discuss the arguments for and against a governmental policy of granting ship subsidies.

13. Give the arguments for and against the free passage of American coastwise ships through the Panama Canal.

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CHAPTER XXX

REGULATION OF RAILROADS

- I. The early situation
 - 1. Power of Congress :
 - a.* The original clause
 - b.* Why power was granted
 - c.* How first applied
 - 2. Growth of railroads :
 - a.* How favored at first
 - b.* What evils crept in
 - c.* The changed attitude
- II. The Interstate Commerce Act
 - 1. Main provisions
 - 2. Powers of Commission
 - 3. Why discriminations were prohibited
 - 4. Other results of the act
 - 5. The defects
- III. Later legislation
 - 1. Effect of Anti-trust Act
 - 2. Act of 1903
 - 3. Act of 1906
 - 4. Act of 1910
 - 5. War-time regulation :
 - a.* Government operation
 - b.* Act of 1920 :
 - (1) Commission's powers
 - (2) Other provisions
 - 6. Importance of regulation
 - 7. The outlook

The Early Situation. — The Constitutional Convention of 1787 gave the national government the following power over commerce, — “ Congress shall have power to regulate commerce with foreign nations, and among the several states, and with the Indian tribes.” The most significant point about this provision is its general and inclusive nature. The word “ commerce ” has proved to be so embracing that Congress has been enabled, with the lapse of time, to exercise powers over activities that could not have been foreseen by the framers of the Constitution. With the application of steam to industry and transportation, commercial activities have so widened that the national government, through this clause, has been able to exercise a restraining control over many anti-social tendencies in American economic life.

*Power of Congress:
The clause.*

The necessity of giving the central government some power over interstate commerce was one of the leading reasons for framing the new constitution. The conflicting interests that resulted from giving the individual states control over commerce proved conclusively, during the régime of the Articles of Confederation, that some federal regulation of commerce was absolutely necessary. Therefore, when the new constitution was drawn up, Congress was given exclusive power to regulate interstate commerce.

Why the power was granted.

This new power of Congress was at first applied to the regulation of water transportation between different states, since waterways (aside from roads) were the earliest means of transporting goods and persons from one place to another. But, with the impetus given to railroad construction in the epoch fol-

How first applied.

lowing the Civil War, the regulation, not of water, but of land transportation became the absorbing problem.

At first, the railroad was encouraged because it proved a blessing to newly developing communities. Cities and states vied with one another in buying railroad securities, in granting immunity from taxation, and in affording every inducement for railroad construction. To these growing communities, the railroad afforded the opportunity to ship out the commodities which they produced, and to bring in the goods which they needed.

This enthusiasm was, however, short-lived. The railroads developed with even greater rapidity than had been anticipated; and, with their development, came an increase in monopoly power upon which railroad enthusiasts had not counted. To be sure, the railroads had their advantages; but the extortionate rates and the discriminations between shippers and towns more than offset the increased commercial facilities which the railroads afforded.

Consequently, a storm of indignant protest was directed against railroad activities. Instead of encouragement, they now received strong condemnation. By 1870, the cry against extortionate rates was common in all parts of the country, but particularly in the agricultural states of the newly developing Middle West. Stringent state laws were passed; but, since the railroads were engaged in interstate business, they well knew that attempts of individual states to regulate their activities would prove ineffectual. Some form of federal regulation therefore became imperative.

The Interstate Commerce Act. — In 1887 this situation culminated in the passage of the famous Interstate Commerce Act, which was directed at interstate passenger and freight traffic carried by railroad or by railroad and water. This Act of 1887 includes five main provisions: (1) unreasonable or extortionate rates were prohibited; (2) discriminations between persons, places, and commodities were made illegal; (3) fares and rates were to be made public; (4) common carriers were not to charge or receive a greater rate in the aggregate for transporting passengers or freight under substantially similar circumstances and conditions, for a shorter than for a longer distance, over the same line, in the same direction, the shorter being included within the longer distance; (5) pooling transactions between railroads were prohibited.

In order to enforce this law, a Commission consisting of five members, appointed by the President with the consent of the Senate, was created. Subsequently the number of commissioners was increased to seven and the term of office fixed at seven years. The Commission was empowered to investigate rates and alleged discriminations, and, where necessary, to bring suit before the courts. Orders issued by the Commission were not binding, should the common carrier, against whom the orders were issued, choose to appeal to the courts. Where an appeal was taken, the Commission and the carrier went through the regular process of suing and being sued, and the decision of the court was final.

The provision regarding unreasonable and extortionate rates was based upon the English common law against extortion. The discriminations between persons, places,

and commodities had grown up with the railroad industry. By charging lower rates to one shipper than to another, the railroad determined which of the two should remain in business; by giving more favorable rates to one town than to another, the railroad determined which town should advance commercially; and by arranging the rates of two commodities, such as flour and wheat, the railroad determined whether wheat should be shipped from the wheat fields to Minneapolis and there ground into flour, or, whether it should be shipped from the wheat fields to the flour mills of the Eastern coast. In any one of these cases, the railroad was an arbiter possessed of despotic power. Had it proved a benevolent despot, all might have been well; but, unfortunately, the use made of this power was in many cases disastrous to the parties concerned.

Why discriminations were prohibited. The publication of rates required by the new law gave all an opportunity to secure the same terms from the railroads; while the "long and short haul" clause was aimed against the abuse of granting a rate, from one city to the next city, lower than the rate between an intermediate small town and one of the cities in question. In an attempt to stimulate competition, pooling was prohibited.

Other results. This last provision regarding pooling was perhaps the most difficult for the railroads to obey. Since so many restrictions had been imposed upon them, pooling seemed to be the only method of agreement left to the railroads. When deprived of this, they were forced into combination. Another defect was the limited power given to the Interstate Commerce Commission. **The defects.** To remedy this, subsequent legislation was enacted. In

all the subsequent acts, however, the principles underlying the original law have been generally maintained.

Later Legislation. — In 1890, the Sherman Anti-trust Law was passed. Although the primary purpose of this act was to break up industrial combinations, certain judicial decisions have been responsible for applying this law, to a limited extent, to the railroads. When pooling was declared illegal in 1887, the railroads entered into certain associations for the purpose of making rate agreements. In 1897, the Supreme Court declared these agreements illegal because they violated the Sherman Anti-trust Act of 1890. Again, in 1904, the Supreme Court, on the same grounds, ordered the dissolution of the Northern Securities Company, a holding company, organized for the purpose of holding the capital stock of the Great Northern, Northern Pacific, and Burlington systems, the first two of which were competing systems. Furthermore, in 1912, a similar decision dissolved the merger of the Union Pacific and the Southern Pacific railroads, because the former held indirectly forty-six per cent of the stock of the latter company.

Effect of
Anti-trust
Act.

At the opening of the twentieth century, through the influence of President Roosevelt, Congress passed more specific railway legislation. In this manner, the Act of 1903, known as the Elkins Law, increased the effectiveness of the Interstate Commerce Commission by making a corporation as well as its agent liable to prosecution; by increasing the penalties imposed under the original Interstate Commerce Act; by permitting the Commerce Commission to secure injunctions from the United States Circuit Courts; and by directing the Attorney General to prosecute under the act. This law expedited

Act of 1903.

the work of the Commission by permitting an appeal, in interstate commerce cases, to be made more directly to the Supreme Court.

A law passed in 1906 increased the administrative power of the Commission by permitting it to revise railway rates.

Act of 1906. Up to that time, the Commission could only declare that a certain rate was unreasonable. Under the new law, it might state what rate was reasonable by fixing a maximum rate. In addition, its authority was extended to all express, sleeping car, and pipe line companies doing an interstate business. The law made further provisions which enabled the Commission to secure uniform accounting.

In 1910 additional railroad legislation created a special Commerce Court in which railroad cases were to be tried.

Act of 1910. Sometimes friction had prevailed between the regular courts of justice and the Interstate Commerce Commission; and the latter body, which had no status as a court, was subject to petty annoyances and delays. It was hoped that this new court would, therefore, facilitate the execution of the findings of the Commission. However, the painful experience of the short-lived Commerce Court proved otherwise, and, in 1913, this Court was abolished.

When the United States became involved in the World War, it was necessary to establish a unified control over the chief transportation agencies of the country.

War-time regulation: Accordingly, on January 1, 1918, the President of the United States placed the railroads of the nation under the direction of the Director General of Railroads. For a period of twenty-six months the railroads were operated by the United States government.

Government operation.

About the same time the government took over the control of the telegraph and telephone lines of the country. The exigencies of war made it absolutely necessary for the government to operate the roads in order that troops might be speedily dispatched abroad, and that priority of transportation might be given to such absolute necessities as wheat, coal, and ammunition supplies. During this period of government operation the railroads performed an heroic service for the nation; but, when it was accomplished, they found themselves sorely in need of capital to replace the rolling stock and freight facilities neglected during that period.

On March 1, 1920, the railroads were returned to private ownership under the provisions of the Esch-Cummins Act. According to this act the Interstate Commerce Commission remains the keystone of the *Act of 1920.* arch of railroad legislation, and is given still greater governmental control over the railroads. This is accomplished by centering further authority and responsibility in the Commission, by requiring this body, from time to time, to determine and publish what percentage of railroad property values, *i.e.* what dividend, constitutes a fair return for the investors, and to adjust rates so that the efficient roads at least will be able to earn that much for their owners and creditors. The act itself provided how much this "fair return" was to be for the first two years of private restoration, namely, five and one-half per cent, with the promise that the Commission might during that time allow, in its discretion, an extra one-half per cent toward capital expenditures. Furthermore, the Commission was instructed to formulate plans for the consolidation of the railroads of the country into a limited number of systems, so that

the financially weaker roads might profit by consolidation with the larger and more prosperous roads. The Commission was also given full powers regarding car service, joint facilities, new construction and abandonment of roads, priority and embargo regulations, and new methods of financing.

The Act of 1920 provides further for the creation of a revolving credit fund of \$300,000,000; it introduces the principle of profit sharing with the government, and includes a complete system for the settlement of labor disputes, embracing local adjustment boards and a central Railroad Labor Board. The act introduces the principle of profit sharing by allowing the government half of the profits in excess of six per cent which the railroads may earn. The provisions regarding the labor boards are exceedingly important. The act specifically creates a Railroad Labor Board of nine members, representing equally the workers, the managers, and the public, appointed by the President with the approval of the Senate, from lists of six names each, in the case of workers' and managers' nominees, submitted to him by the parties of interest. The Railroad Labor Board not only deals with appeals, but also has powers of original initiative. It relies upon full publicity for the enforcement of its decisions.

The problem of railroad regulation is doubly significant. It is necessary of solution not only for itself, but also for the purpose of showing the method of governmental procedure in regard to properly controlling all forms of large scale production. Transportation agencies enjoy such a monopolistic position that they can practically determine the welfare of individuals, of communities, and of industries. Since it is antagonistic

**Importance
of regu-
lation.**

to social welfare that such great power should rest uncontrolled in the hands of private individuals, society, through proper legislation, must protect its own interests while duly regarding the rights of its individual members. If, therefore, the nation succeeds in solving the railroad problem, the experience so acquired may be applied not only to the solution of questions relating to public utilities, but also to similar problems of monopolistic production.

That the attitude toward business is tending in this direction is seen in the establishment of the Federal Trade Commission, and in the authority given to the **The** Interstate Commerce Commission, in 1914, to **outlook.** enforce the Clayton Anti-trust Act so far as it applies to common carriers. Further evidence of the intention of the government to control monopoly is found in the extension of the powers of the Interstate Commerce Commission not only over steam railways, but also over electric railways, telegraph, telephone, and cable companies, and to some extent over water carriers; in prohibiting interstate railways from having interests in competing water carriers; and in forbidding railroad companies engaged in interstate commerce from transporting goods, other than timber and its products, which have been mined or manufactured under the authority of the railroad companies concerned. When we consider, therefore, the progress attained by the United States, since the opening of the twentieth century, in this direction alone, the eventual regulation of monopolistic production in all its forms seems assured.

QUESTIONS FOR RECITATION

1. Explain the power of Congress over commerce. Show its significance.
2. Why did the Articles of Confederation prove unsatisfactory? How was this defect remedied?
3. How did Congress first exercise its power over commerce? What effect had the invention of the steamboat in this direction?
4. When the steam railroad first appeared, how was it favored? Why?
5. How did it afterward abuse its privileges? What demand grew out of this abuse?
6. State the main provisions of the Interstate Commerce Act. Show why each was necessary.
7. What are rebates? Why are such discriminations made illegal?
8. State the original powers of the Interstate Commerce Commission. Show how these powers were successively enlarged by (1) the Act of 1903, (2) the Act of 1906, and (3) the Act of 1920.
9. When pooling was declared illegal, to what did the railroads resort and for what purpose?
10. Explain clearly how the Sherman Anti-trust Act was applied to railroad combinations. Give at least two examples.
11. When railroad mergers are dissolved by order of the court, what are the practical results of such action?
12. Why was the Commerce Court abolished?
13. Why was it necessary for the United States government to operate the railroads during the World War? To whom was this operation intrusted?
14. What were the effects of government operation? Was this an experiment in socialism?
15. When and why were the railroads returned to private ownership and management?
16. Explain the main provisions of the Esch-Cummins Act of 1920 in regard to (1) the powers of the Commission, (2) the "fair return" provision, (3) the government profit sharing plan, and (4) the method of settling labor disputes.
17. What restrictions are placed upon railroads with regard to (1) commodities transported, (2) shipping interests?

18. Why is the solution of the railroad problem vital to national welfare?

19. What is likely to be the future of big business in this country? State your reasons.

PROBLEMS FOR DISCUSSION

1. Why does the question of the control of the railroads in the interest of the public present especial difficulties in America?

2. Has the government built and operated railroads successfully in any country? Give examples.

3. Do you think the United States government should own the railroads in this country now? Give reasons.

4. Who is responsible for the present large number of railroad accidents — the railroad, the public, or the employee? Why?

5. Is federal control superior to state control of railroads? Explain fully.

6. What causes led to the passage of the Interstate Commerce Law?

7. What were the leading advantages of the law?

8. In what respects was the law ineffectual?

9. How have the provisions of the original Act of 1887 been strengthened by later legislation?

10. Discuss the value of uniform accounting.

11. What is pooling, and why was it made illegal?

12. Would all rates be reasonable and just if made on the basis of distance only? Explain your answer.

13. Has the Interstate Commerce Commission power to fix rates?

14. Give the arguments for and against government ownership of railroads.

15. To what extent has the Federal government control over commerce within a state?

16. Of what offense was the old Standard Oil Company found guilty? Why was this extremely anti-social?

17. On what basis should railroad capitalization be determined?

18. What are the limitations of government control over "big business"?

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CHAPTER XXXI

EFFICIENCY IN PRODUCTION

- I. Factors of production
 1. The factor of resources :
 - a.* America's advantages
 - b.* The great danger
 - c.* The law of diminishing returns
 - d.* The effect of war
 - e.* The remedy
 2. The factor of labor :
 - a.* Character of the people
 - b.* Labor's rate of increase
 - c.* Labor's efficiency
 - d.* Effects of war
 - e.* The outlook
 3. The factor of capital :
 - a.* Its early abundance
 - b.* Its law of increase
 - c.* Effect of war
 - d.* The solution
 4. The factor of management :
 - a.* Its modern importance
 - b.* Its future development
- II. Kinds of societies
 1. Retrogressive societies
 2. Static societies
 3. Dynamic societies

Having examined the factors at work and the typical fields of industrial activity in the production of wealth in the United States, it is well to summarize now the condi-

tions of American production and to attempt to arrive at some conclusions regarding efficiency in American economic life.

Factors of Production. — So far as the bases of production are concerned, we have long since seen that the fundamental thesis of the economist is that all production depends, in the last analysis, upon the harmonious union of the requisites of productive enterprise, that is, upon the successful utilization of the land, labor, and capital resources of society. We have further seen that, in the period following the Civil War, the organization of industry in the United States attained such perfected development as to render the element of managing ability a vital factor in all the more complicated industrial wealth-producing activities of the American people. Although this last element depends upon some form of combination of the more fundamental factors of production, its separate treatment, in the more advanced stages of national economic development, is necessary to a complete comprehension of the productive process. Just as managing ability and, before that, capital were the latest productive elements to appear in industrial society, so natural resources and labor were the primary and original factors of early production. These two are co-equal in importance; for, without each, no creation of economic utilities is possible. From the standpoint of production, national prosperity is dependent upon the existence of those natural resources summed up in the word "land," and upon the application to this land of an intelligent and adequate supply of labor. What conclusions, then, may we draw, in these respects, regarding the possibilities of continued national prosperity in the United States?

America's advantage in the field of natural resources is well known. To realize again the significance of this truism, we have but to recall the great extent and variety of soil and climate enjoyed by the United States, the rich mineral deposits of the land, the forest areas still preserved, the possibilities of its water resources, together with the great system of waterways, harbors, and coastal advantages inherent in the land. Because of these tremendous advantages, the United States has been able, in the course of half a century, to leap to the forefront of nations in the production of coal, iron, steel, and other raw materials of industry, as well as in the annual output of corn, wheat, cotton, lumber, and other agricultural products. The very youth and power of the land have redounded, not only to the credit of the nation, but to that of the entire civilized world.

But nations, like youths, cannot glory forever in an inexhaustible fund of natural energy. Since the founding of the nation, the resources of the country have been steadily utilized. Over one-half of the land originally belonging to the Federal government has been practically given away to individuals and corporations for development. These public lands have been granted for the endowment of free schools, for the use of railroads and other internal improvements, and for homesteads for the support of the landless. The amount of "free land," therefore, in America is steadily declining; and, of course, much of the land which remains is inferior in productive capacity to that which has been utilized. We must exclude from this category, however, many lands rich in natural resources which are still unappropriated, notably the 368,000,000 acres of unappropriated public

land in Alaska. Aside from these Alaskan lands, there were, in 1909, 363,300,000 acres of unreserved and unappropriated lands belonging to the United States government; while 571,600,000 acres had been turned over to individuals and corporations, 153,500,000 acres had been granted to the states, and 324,500,000 acres had been reserved for forests, parks, and other public purposes. Up to that time, the United States had been disposing of its public lands — exclusive of those in Alaska — at the rate of about fifteen million acres a year. Just how long the remaining public lands of the United States will hold out is, therefore, a matter of grave concern.

It will readily be seen that this gradual exhaustion of public lands may have a marked effect upon the future welfare and prosperity of the nation. In fact, some writers have already attributed the existence of poverty in the United States to this private appropriation of public lands. Furthermore, we have seen that land itself, after a certain point has been reached in its cultivation, tends to yield a diminishing return. That is to say, land tends finally to yield a smaller relative return in proportion to the increased amounts of labor and capital applied to it. Has this point been reached in the cultivation of land in the United States? Certainly, in some respects, there is considerable room for speculation on this question. However, if we consider the natural resources of the United States as a whole, and the ingenuity and inventive genius of the people in combating land's diminishing tendency, we may venture to assert that many years will elapse before this law grips all returns from natural agents. On the other hand, there seems to be recurring indications of the operation of this law in par-

*Law of
diminishing
returns.*

ticular directions. For example, the increased cost of production of coal and oil and the general rise in prices following the World War in the United States have been accounted for in part on this basis. However, it is impossible to arrive at any definite and accurate conclusion in this regard, because such varying estimates have been given respecting the available supply of our natural resources. For example, although many people have been accustomed to think of our available coal supply as lasting only another hundred years, an estimate of the United States Bureau of Mines in 1920 placed the supply of minable coal in the United States at 3,553,637,100,000 tons, or enough to last at the present rate of consumption for 7000 years.

Of more direct bearing upon the question of America's natural resources is the effect of war. The World War forced the productive process in the United States to its utmost limit. Never before, in the *Effect of war.* same length of time, had its volume of production in agricultural products and in certain raw materials of industry been so great. In many respects the nation was forced not only to support itself, but to feed and supply a large proportion of European peoples. All temporary considerations of possible future needs were thrown to the winds. Whatever the immediate cost in natural resources the war had to be won. As a result, the nation suffered, at the close of the war, from a partial exhaustion of natural resources. Millions of dollars' worth of agricultural products and of mineral wealth had been sacrificed on the altar of Mars. The reaction of war was found in diminished natural resources.

There is only one remedy for the ravishing of natural wealth. This is found in a return to the ideals of conserva-

tion. The waste of war must be replaced by the wise use of our remaining resources. The perpetuation of the democratic ideal, as against the menace of autocracy, *The remedy.* has been worth a thousand times more than the destruction of the natural wealth necessary for its continued realization. But the problem of the twentieth century is to guide production along the lines of the careful utilization of America's remaining natural resources. Through scientific farming, irrigation, and reclamation, the soil must continue to yield an increasing return; through the utmost care and the complete elimination of waste, the mineral resources must be husbanded for future generations; through the utilization of new forms of power, the diminution of coal and oil resources must be offset; and, through wise governmental action, land monopoly must be checked, and a far-seeing policy formulated for the future control and development of America's remaining natural resources.

Of equally vital importance to individual welfare and social prosperity is the labor supply of a nation. Natural resources are useless without an adequate and efficient labor force. From our review of the process of production in the United States, what conclusions may we draw with regard to the character, amount, and efficiency of American labor? From our examination of the population of the United States, we have seen that it developed from a small and comparatively homogeneous, compact group of three million people in the eighteenth century to an immense, heterogeneous, and diverse mass of over one hundred millions in the twentieth century. The present composite character of the American people is largely due to the European

The labor factor:

Character of the people.

immigration of the past fifty years. The early character of the people was that which naturally results from the life of the frontier — rugged, individualistic, and adaptable. As the frontier gradually disappeared from American life, the people became more careless, generous, and wasteful. They exploited the natural resources of the country, but retained their boundless spirit, energy, and initiative.

America's development has not lagged for want of laborers. This increase in population has sometimes been due as much to immigration as to the natural increase in birth rate. In fact we have seen *Labor's rate of increase.* that, during the later nineteenth century, the native white birth rate gradually declined, and that this decline was partially offset by the great number of foreign elements coming into the United States. Furthermore, this increase in the sum total of population has not been attended, as Malthus had predicted, by widespread poverty. In other words, population has not outstripped the means of subsistence. While poverty has existed, the early resources of the country were so abundant that the land furnished general opportunity for the increased millions to earn their livelihood. Labor's rate of increase was not greater than the return from the land. Throughout the nineteenth century the supply of labor was sufficient to develop the land, and the land, in return, was sufficient to support the increased population.

But since millions of this increased labor supply were made up of blacks and immigrants, the native white stock has been partially weakened. Hence, while the *Labor's efficiency.* American labor force has steadily increased in quantity, it has somewhat declined in uniform quality. This fact has had a slight effect upon the efficiency of labor.

While, in many respects, certain groups of American labor are, to-day, more efficient than ever, there are numerous instances of lowered efficiency in our labor force. This is probably due to the injection into American life of lower European standards, and of ideas and habits of thought which are entirely out of harmony with American institutions. We are apt, however, to exaggerate the importance of this element, because we have been so accustomed to regard American labor as representing the climax of industrial efficiency.

The World War also accentuated the shortcomings of labor. From the normal, daily grooves of ordinary economic life, the American people were suddenly *Effects of war.* thrust into the abnormal pursuits of war. As a result, the entire industrial system became temporarily dislocated. The aftermath of war was felt in a series of abnormal conditions. The entrepreneur made enormous profits through the sharp rise in prices, and the laborer received a corresponding increase in wages. For the first time, many laborers began to realize the full economic importance of their position and to make persistent demands for further wage increases. With the aid of higher wages, labor often withdrew temporarily from production. This situation naturally resulted in underproduction and in still higher prices. At the same time, labor became extravagant in its consumption of goods, without enlarging the volume of production. The labor shortage became acute, particularly in agriculture, which suffered greatly as a result of the shifting of former agricultural labor to the cities after the process of demobilization had been completed.

But labor unrest, at its worst, is only a temporary phe-

nomenon in American life. Idleness, extravagance, and labor disorders are not permanent characteristics of Anglo-Saxon peoples. Their method is one of *The* compromise and adjustment. The task before *outlook.*

the American people is to educate the newer element in the population to the point of view possessed by the original stocks. When this is accomplished, there need be no fear of revolutionary European doctrines contaminating American life through the foreign-born population. Such labor radicals as preach the doctrine of direct action, sabotage, and confiscation of capital have no place in American civilization. They may thrive in the sickly soil of oppressed Europe, but wither when transplanted to the prosperous land of America. As compared with foreign countries, therefore, the United States has, on the whole, a splendid asset in its laboring population, which is not only increasing in number, but inherently capable, through proper guidance, of attaining the highest industrial efficiency.

If the gospel of work and conservation is unceasingly practiced in the United States, this nation, so far as the primary factors of production — land and labor — are concerned, will be able to realize the ideals *The factor of capital:* of individual prosperity and social welfare. *Its early abundance.* Because of the past reckless appropriation of natural resources and the later acquisition of unassimilated labor elements in the population, the future prosperity of America may not be so easily attainable as that of pioneer days; but this fact does not mean that future generations of Americans will be denied national prosperity. It only means that the United States, in a sense, stands at the parting of the ways, — that waste must be replaced by

conservation, that labor unrest must be succeeded by industrial stability. So, too, with regard to the capital resources of America. This factor has been abundant in the past, and, through the elimination of extravagant spending and a normal increase in production, capital will continue to be more than sufficient to meet the requirements of future production. We have seen that, throughout the nineteenth century, the increase in capital — both in capital goods and capital value — was one of the striking characteristics of American civilization. So abundant was this supply of capital that it existed in all kinds of surplus wealth — factories, locomotives, ships, raw materials of industry, and countless other goods used to assist in future production.

Since capital is the result of the application of labor to land, it is more easily replaced, when once destroyed, than
Its law of increase. is either of the primary requisites of production. “Capital is an intermediate product of nature and labor, nothing more. Its own origin, its existence, its subsequent action, are nothing but stages in the continuous working of the true elements, nature and labor.” The ability to increase capital is, therefore, not beset by any intrinsic difficulties. Its law of increase depends, when once it is produced, upon the amount of wealth which can be saved and upon the disposition to save. Without adequate and efficient production, there can be no surplus of production over consumption to furnish the starting point for the accumulation of capital. When extravagant consumption outruns production, or when underproduction results through inefficient or inadequate labor resources, no fund for capital development is possible. Hence the first requisite for the increase of capital is efficient produc-

tion. When a surplus is once assured, the capital increase depends (1) upon the amount of this surplus, that is, the actual amount which can be saved without lowering the normal standard of living; and (2) the disposition to save on the part of the producer. Throughout the nineteenth century, both these requirements were capable of fulfillment by the American people.

It is interesting to note the effect of war upon the development of capital. The very essence of war is the destruction of economic utilities. Every one is familiar with *Effect of* the fact that billions of dollars of European *war.* wealth were destroyed by the World War. The resulting shrinkage of European capital was perhaps unparalleled in human history. How did this cataclysm affect American capital? Its effect was two-sided. In the first place, billions of dollars of goods were sent to Europe to be destroyed in the great conflict. This wealth was not being used to produce more wealth, but was being immediately consumed. Had a similar amount of wealth been produced and not later destroyed, the capital fund of the world would have been enormously enlarged during that period. While the war was in progress, however, the true situation was temporarily obscured, because the war's immediate effect was not felt on account of the great reserves of production in the United States. Furthermore some of the goods produced during that period in this country, such as ships, were not actually destroyed, but really served to increase the fund of capital. In the second place, the ultimate effect of the World War upon our capital supply was not immediately perceived, because the volume of money in the United States rapidly increased during that period. This increase was due (1) to the influx of European gold

in payment of American goods shipped abroad, and (2) to the inflation of American currency through the expansion of credit and the issuance of Federal Reserve notes. Of course, this inflation of currency and underproduction of capital goods was accompanied by the phenomenon of high wages and still higher prices. So great was the increase in the volume of money that savings bank deposits, in 1918, reached a sum total of nearly five and one-half billions of dollars. The total capital accumulations of the United States in that year were estimated at nearly \$22,000,000,000 by Professor David Friday, who further stated that "in 1918 approximately thirty per cent of our national income was saved."

The World War, however, served to bring out the distinction between money and goods. In 1920, there were *The solution.* in the United States \$4,000,000,000 in paper money, or three times that of the pre-war period; and of this amount almost \$3,000,000,000 were in Federal Reserve notes. At the same time the war disorganized many of the normal and regular channels of American production. But it is an economic law that a nation, in order to enjoy industrial stability, must maintain a proper relation between the volume of currency and the volume of production. Mere abundance of money means nothing, while shortage of essential goods means everything, to the prosperity of a nation. Under such circumstances, it is necessary to reestablish economic equilibrium. Through the gradual contraction of credit and the retirement of government notes, inflation ceases and speculation is curbed. At the same time the fund from which capital is actually drawn becomes enlarged by increased production, and by the practice of thrift, instead of extravagance, in the con-

sumption of goods. The real basis of capital is not money and credit, but goods and material values.

Another element to be considered in measuring efficiency in production is the question of business organization or management of industry. The three factors of production must be scientifically mobilized for purposes of production. In modern industrial society two or three of the factors are often under the control of one management. For example, in large scale production the owners of the capital are often the owners of the land. To this combined control of land and capital there is then added the management of the labor force required in the process of production. We have seen that the commander of these industrial forces has been described as organizer, entrepreneur, or captain of industry. In America, the development of managing ability has become so important and striking that the entrepreneur is entitled to separate consideration as a factor of production. Upon this element the success or failure of the enterprise often depends. More than this, the investments of millions of stockholders are dependent upon the sound judgment and business management of the entrepreneurs. It is this factor that is largely responsible for the development of the great American trusts which have characterized and assured the industrial supremacy of the United States.

The factor of management:

Its modern importance.

Consequently, the future development of business organization is of the greatest importance to American society. Is the future management and organization of American industry likely to be beneficial or detrimental to the welfare of the American people? The answer to this question will depend upon our ability to

Its future development.

develop individual initiative in harmony with the public good. The experience of the railroads under government operation seems to point to the fact that American business enterprises thrive more successfully under the influence of private management and individual initiative. In our present stage of political development, industry does not seem to be so well organized and managed when directly operated by governmental authorities. The most effective management of industry seems to be linked with motives of personal gain and individual interests. But this fact of human nature does not mean that private gain is to be the sole or even the chief end of coöperative enterprise. On the contrary, the public must be protected from the unrestrained exercise of individual power, when that power comes into conflict with the good of the community. The monopoly power of individual or corporate management must be checked in the interest of the public good. Through some form of social control, — through government regulation, — the element of management in production must be so directed that the interests of the public will be safeguarded without impairing the efficiency of industrial organization.

Kinds of Societies. — We have now concluded the discussion of some of the more important problems arising from the production of wealth. Since land, labor, and capital are all necessary to production, the wealth-producing machinery of society will depend upon the efficiency of each. The greater the productive capacity of each requisite, the greater will be the possibilities of national prosperity. From this point of view, therefore, one of three things may happen in social evolution. In the first place, it may

Retro-
gressive
societies.

happen in an old civilization that population is increasing while the other factors of production — land and capital — are decreasing. Through loss of land or through soil exhaustion, natural resources may be depleted ; while, through extravagance, ignorance, or inefficiency in labor, surplus wealth may be destroyed and the capital supply of the nation exhausted. As a consequence, the production of wealth gradually decreases, and when this condition becomes general throughout the nation, the society becomes retrogressive. The path of history has been strewn with such decaying civilizations.

In the second place, a society may be stationary. For centuries, perhaps, the methods of utilizing natural resources and of developing capital may have remained **Static societies.** practically unaltered, while the population may have increased in numbers, but not in efficiency. When this situation exists, it is impossible to satisfy the higher wants of an advancing civilization, because the volume of production remains proportionally the same throughout the passing of the centuries. The weight of custom and tradition prevents the development of efficient methods of production, and thereby obstructs the forward, progressive movement of society. For centuries, China has been a classic illustration of a static society. It is possible, however, that the twentieth century may see China freed from enslaving tradition, and, thereby, place this ancient civilization in the commanding position warranted by its natural resources.

Still another possibility is open to society. A civilization endowed with rich natural resources, an efficient and adequate labor force, and an abundance of ever increasing capital may progress rapidly in the production of material

wealth. Because of the efficiency of the factors of production, the wealth of the community may be constantly increasing. In this manner, the higher wants of man may continue to expand, and their satisfaction will be assured by the increased production. Such a dynamic civilization presents infinite possibilities for individual prosperity and social welfare. Our study of production in the United States shows conclusively the dynamic, progressive character of American society.

QUESTIONS FOR RECITATION

1. Why is it important to emphasize efficiency in production?
2. Contrast the importance of the primary with the secondary factors of production. Give examples.
3. Contrast the natural resources of the United States with those of England; with those of Spain; with those of Russia; with those of Italy.
4. In which of these countries, and in what occupations, is the law of diminishing returns operating? Give reason in each case.
5. Of what national policy is the United States feeling the effects to-day? State the advantages and disadvantages of this policy.
6. Give some idea of the amount of unappropriated public lands in the United States; of the amount appropriated; of the amount reserved. Where are the present unappropriated lands chiefly found?
7. How do you account for the shrinking of our natural resources? Explain the effect of the World War upon them. What is the remedy?
8. Contrast the early character with the later character of the American people. How do you account for the change?
9. Is the United States likely to suffer from a permanent shortage of labor? What makes you think so?
10. Discuss the efficiency of American labor.
11. Explain clearly the effects of the World War upon labor, both in this country and abroad.

12. What is the best method of curing labor troubles in the United States? Why?

13. Why has capital been abundant in the United States? What will its future increase depend upon? Is it likely to increase?

14. Why is it necessary to emphasize production on the one hand, and thrift on the other hand?

15. Discuss the effects of the World War upon the supply of capital: (1) in Europe, (2) in the United States.

16. Was the capital increase during this period mostly in capital goods or in capital value (money)? Why? What was the effect of this?

17. What dangers result from inflation? How may inflation be remedied?

18. Discuss the importance of business management as a factor of production. Show its origin.

19. Upon what will its future value depend? Is it likely to increase or decrease in importance? Why?

20. Define three kinds of societies, showing in each case the interrelation of the factors of production.

PROBLEMS FOR DISCUSSION

1. May production, as well as consumption, be a measure of welfare? How? Which is the better measure? Why?

2. When production is great enough to insure national prosperity, does individual welfare necessarily follow?

3. Explain how individual prosperity is affected by the manner in which wealth is distributed throughout society. Give examples.

4. Name a country in which great production and glaring instances of poverty are found. Account for this situation.

5. Cite a nation in which there is great production and general prosperity. State the reasons for this.

6. Give examples of retrogressive and static societies. Show why in each case.

7. What is a dynamic society? Give an illustration from Europe and explain clearly.

8. How would you classify Japan? India? Why?

9. Did Malthus believe in the continued existence of dynamic societies? Why not?

10. What theories handicapped the classical school of economists in their views regarding dynamic societies? How?

11. From the standpoint of production, discuss the future possibilities of American civilization.

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PART FOUR
PROBLEMS OF EXCHANGE
CHAPTER XXXII
VALUE AND PRICE

I. Value

1. Meaning of exchange
2. Nature of value :
 - a.* Its popular meaning
 - b.* Requisites of economic value :
 - (1) It arises from utility
 - (2) It involves scarcity
 - c.* Relation between value and wealth
 - d.* Relation between utility and usefulness
3. Forms of economic value :
 - a.* Value in use :
 - (1) Meaning
 - (2) Examples
 - b.* Value in exchange :
 - (1) Meaning
 - (2) How determined
 - (3) An illustration

II. Price

1. What price is
2. How price is determined :
 - a.* When competition is free
 - b.* When competition is not free
3. The conclusion

Value. — Leaving now the subject of the production of wealth, we pass on to a consideration of some of the more important problems connected with its exchange.

Meaning of exchange. Wealth would be of little value if, after it had been produced, it were not transferred from one individual to another. It will readily be seen that the complex conditions of modern industrial life, due to separation of employments and division of labor, make it impossible for one man to produce all the economic goods that he requires for his own consumption. The process by which he secures goods from others in return for his own goods is known, in economics, as the exchange of wealth. In advanced civilizations the welfare of individuals and of society is clearly dependent upon this process of exchange.

Goods would not be desired and exchanged for one another unless they possessed value. In a popular sense, the term "value" is given a wide application.

Popular meaning. We speak of the value of an individual to a community, or of the value of an educational or of a religious system to society. In this sense, the term refers to the desirable qualities in the person or institution. Consequently we think of "personal values," "educational values," and "religious values" — each one of these phrases illustrating the general meaning of the term value as used in everyday life.

In economics, however, the term value has a special significance which arises primarily from the utility of goods.

Requisites of economic value. It will be remembered that "wants" are the desires which individuals have for goods, and that "utility" is the name given to the want-satisfying quality in the good. The presence of utility

is the first requisite of economic value. Wheat, books, steel rails, petroleum — all possess utility because each satisfies some particular individual want. Furthermore, all these goods are limited in extent.

But not all goods are so limited ; some are free. Occasionally goods are so plentiful that, although they have utility, they do not possess value in the economic sense. For example, water, a free gift of nature, may or may not have economic value. Frequently it has not because it is not an economic good, — no one would give something upon which he had spent time and effort in exchange for it. But to a man adrift on the South Pacific the value of drinking water would be inestimable, — he would give anything in exchange for it. Thus, in addition to utility, scarcity is necessary to economic value.

This analysis of value makes clear the relation between economic value and material wealth. It will be recalled that wealth, *i.e.* economic goods, must possess three characteristics. In the first place, utility is essential to material wealth ; it is also essential to economic value. Secondly, wealth involves the element of industrial effort, that is, labor. This characteristic of wealth is synonymous with the element of scarcity in economic value ; for only free gifts of nature, like air, are boundless in extent, and their existence involves no expenditure of labor or industrial effort. In other words, goods are scarce because industrial effort, or labor, is necessary to their production. Finally, material wealth possesses the quality of exchangeability, which, of course, is the very measurement of economic value. Since things which are equal to the same thing are equal to each other, we find that material wealth is equivalent to economic

*Relation
between
value and
wealth.*

value. Hence, economic goods and economic value are synonymous in meaning.

It has already been pointed out, however, that utility is not synonymous with usefulness. Utility is simply the *Utility and usefulness.* quality in a good which satisfies a want. Now, if an individual wants something that is not useful, this useless, or even harmful, thing will possess utility. A diamond necklace or a box of cigars may, therefore, possess as much utility, and consequently value, as a well-furnished house or a nourishing diet.

We may thus conclude that economic value is the worth, without any necessary regard to the usefulness, that is attached to material wealth. If, now, we stop to consider for a moment, we shall see that this *Forms of economic value :* worth may be estimated either by the individual for his own special use, or by the whole group for purposes of exchange. This difference in the method of estimating the worth of economic goods gives rise to two forms of economic value: value in use and value in exchange.

Value in use is purely subjective; that is, it is simply an individual estimate of the worth of a given commodity.

Value in use. One individual may value a certain economic good far more highly than would another individual. In this determination of value, personal peculiarities play a large part. For example, a silver spoon that has become an heirloom may satisfy such an intense want in an individual that he will value it far beyond its intrinsic worth. This individual valuation of the spoon is clearly not a measure of its social value. In a similar manner, an old and time-honored homestead may be more highly valued by the descendant of the original owner than by the community at large. While these may be exagger-

ated cases, nevertheless, it is perfectly true that individual valuations are not just estimates of values put upon goods by society as a whole. Therefore, economics is concerned primarily with the second kind of economic value, — value in exchange.

Value in exchange is a social valuation placed upon an economic good by a number of persons. Therefore, in determining value in exchange, the good is *Value in* looked upon, not from the standpoint of its *exchange.* utility to a single individual, but from the point of view of its worth to a whole group of people. Thus, value in exchange is the social estimate of the worth of an economic good and represents, in the words of Professor H. R. Seager, the “power of a good to command other goods in exchange for itself.”

In estimating this exchange value of a commodity, utility and scarcity play the determining parts. Now utility, itself, is variable. In discussing this subject under the head of consumption, we saw that to the tired traveler the utility of the first apple is much greater than the utility of the third apple; and that, in consuming apples, man soon reaches a stage when his desire for apples is satisfied. The utility of the apple at this point is called its marginal utility, and it is upon this marginal utility that value in exchange depends. Furthermore, it is not the marginal utility of a commodity to a single individual that determines its exchange value; but it is its marginal utility to a whole community that is the measure of this value. Thus, exchange value depends upon the estimate that society places on marginal utilities.

In determining the exchange value of a given commodity, the question of marginal utility depends not only upon the

social estimate of its worth, but also upon its scarcity. This fact is popularly expressed by saying that the value of an economic good varies with the relation of supply and demand. This, however, is only another way of saying that exchange value depends upon marginal utility, because an increase in the supply of a commodity means a decrease in its marginal utility; and this, in turn, the demand remaining the same, means a fall in value. On the other hand, a decrease in the supply of a good means an increase in its marginal utility, and a corresponding rise in value, if the demand remains unchanged. From this standpoint, therefore, the amount or scarcity of a commodity (supply) taken in conjunction with the intensity of its want-satisfying quality or utility (demand) determines value in exchange.

For example, if the demand remains the same and there is an increase in the supply of turkeys, their marginal utility will decline and their exchange value fall. But if, with the approach of Christmas, the demand for turkeys increases and the supply remains stationary, the marginal utility of turkey will become greater and the exchange value higher. This relation between supply or goods, on the one hand (scarcity), and demand or wants, on the other (utility), is the key to the determination of economic value.

Price. — Since value in exchange is a relation between goods, society must devise some accurate method of measuring this relationship. Although every economic good has the power to command another good in exchange for itself, it is necessary to measure the value of each good in terms of a standard commodity. In most advanced societies, gold is this standard commodity; and

What
price is.

money is the common measure of economic values. Therefore, price is exchange value expressed in terms of money. When, for example, we wish to express the exchange value of some commodity, such as a pear, we do so in terms of some other commodity which is used as a standard of measuring all values. We do not say that the pear is worth two apples, but that the pear is worth two cents; because money, not apples, is the standard by which all economic values are measured. Money thus becomes a common denominator of value, and prices are expressed in terms of this commodity.

Under conditions of free competition, buyers and sellers meet on a common ground — the market place — and there determine price by deciding the value of commodities. The value agreed upon is the price, and it is expressed in terms of money. The price will depend upon the law of supply and demand governing value. The seller will look at the problem largely from the standpoint of production, and the buyer from the standpoint of consumption. This method of determining price is still in vogue, to-day, in backward and rural communities. In fact, even in some civilized European countries, such as Greece and Italy, "bargaining" is still resorted to as a method of determining prices. Usually, however, in large modern societies, the "one price" system has been adopted. That is, the seller estimates the value of the good to the community in terms of price. If his estimate is correct or nearly so, he sells the commodity; if not, he changes the price to conform to the social estimate. Thus, price represents the point at which the seller and the buyer meet in their estimate of value.

How deter-
mined:

When
competition
is free.

From this discussion we have seen how price would be determined normally. On the one hand, among producers there would be free competition, and, *When competition is not free.* on the other, among consumers there would be wants of varying degrees of intensity; while the law of supply and demand would form the backbone of the whole process. But conditions are not always as here depicted. In fact, in modern industrial society, conditions of production are continually changing. Competition gives way to monopoly, and cost of production sometimes plays a diminishing part in determining prices. Consequently, in this absence of competition, the monopolist fixes the price at a point which affords him the greatest monopoly profits.

Thus price may be viewed from the theoretical, or from the practical standpoint. When ideal conditions of free *The conclusion.* competition prevail, price will tend to fluctuate according to cost of production. Under these conditions, the theoretical laws of value will really determine prices. But, at present, prices are not so ideally determined in American society. The development of large scale production has tended to curtail competition and to strengthen monopoly. Under these conditions, prices may be fixed without any necessary regard to cost of production. Therefore, if we would understand how prices are actually determined, we must investigate to what extent monopolistic combinations are prevalent in the United States, and the effect of their monopoly power upon prices.

QUESTIONS FOR RECITATION

1. Explain the importance of exchange to society.
2. State the popular meaning of value. Give an example.
3. Name the requisites of economic value. Define each.
4. Show why both utility and scarcity are necessary to economic value. Give examples.
5. Why is material wealth sometimes defined as "that which has exchange value"?
6. May a useless thing possess economic value? Why? A harmful thing? Why?
7. Name two forms of economic value. Define and give an example of each.
8. Explain clearly the difference between use value and exchange value.
9. Show how value in exchange is determined — stating the two factors in the case.
10. Explain clearly the effect of supply and demand upon exchange value; give an example.
11. What is price?
12. What is the relation between price and value?
13. How are prices determined under free competition?
14. What determines price when competition is not free?
15. How are prices determined in the United States to-day?

PROBLEMS FOR DISCUSSION

1. Does every good possess economic value? Why? Does everything which possesses utility possess economic value? Why not?
2. Have the following value: a gambler's pack of cards, clothes of antiquated fashion, opium, air, tobacco? State reason in each case.
3. If wealth increases, will there be a greater sum total of exchange value in the community? What is the relation of wealth to exchange value?
4. Is an encyclopedia wealth? Among Indians? Has it value?
5. "Whisky is not wealth. It has no permanent value for society." In what sense is the term "value" used?

6. A mercantile establishment advertises "the best values in the city." What is meant here by value?
7. Could a thing have value unless it was desired? Unless it was scarce? State the reasons.
8. Draw up a sentence in which value is used in the sense in which the economist uses it.
9. Would a bag of gold have value to a shipwrecked sailor on a rocky and deserted island? Would a loaf of bread? Why?
10. Explain the importance of the idea of price to society.
11. Can all values rise? Can all prices rise? Explain the reasons.

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CHAPTER XXXIII

PRICE AND MONOPOLY

- I. Monopoly power
 1. How measured
 2. How limited
 3. Size not essential
- II. Kinds of monopolies
 1. Industrial monopolies :
 - a. Created by law :
 - (1) Through control of natural resources
 - (2) Through patents and copyrights
 - b. Created by organization
 - c. Created by both
 2. Franchise monopolies :
 - a. Transportation
 - (1) Railroads
 - (2) Electric traction
 - b. Power and light
 3. Labor monopolies :
 - a. Personal monopoly
 - b. Monopoly of organization
 4. Public monopolies
 5. Natural monopolies
 6. Conclusion

Monopoly Power. — At present the factor of monopoly is one of the chief elements in fixing price. Popularly, the term "monopoly" is applied to any large industrial organization having more or less exclusive control over its product. But from an economic standpoint, an organization is a monopoly only when,

through crushing competition and controlling output, it is in a position to fix price without regard to the laws of value. In other words, a monopoly is an organization with the power to fix price above or below a competitive level. The only real measure of the existence of monopoly is its price-fixing power.

Observe that while price-fixing capacity is the test of monopoly, it does not necessarily follow that the monopoly can fix any price that it chooses. For example, **How limited.** if a company had a monopoly of iron ore and fixed the price at a prohibitive figure, industry would substitute cement for iron to such an extent that either the price would not be maintained, or, if it were maintained, the product would remain unsold. Thus the power of the consumer to substitute one commodity for another limits the power of monopoly to fix any price it might desire.

This power to fix price which determines monopoly may relate to the production of a commodity on a very large **Size not essential.** scale or on a very small scale. For example, the original Standard Oil Company unquestionably had monopoly power, since it had the power to fix the price of petroleum and petroleum products above a competitive level. The same thing is probably true to-day of the manufacturers of plate glass and of the manufacturers of print paper. These businesses are very large, and the products in which they deal are widely used and of great value. On the other hand, a manufacturing company may be engaged in the production of articles that are used by only a few people, and its possibilities of growth may thus be extremely limited. This is the case, for example, with the manufacturers of psychological instruments. But even here, there is monopoly power. In fact, the demand .

for these instruments is so small that those who make them charge for them prices which are out of all proportion to their cost of production. In the case of glass and paper, the monopoly power is exercised to a limited degree; in the case of psychological appliances, the monopoly power is very great, and the monopoly price far exceeds the competitive one.

Kinds of Monopolies. — Monopolies may be divided into five groups: (1) industrial monopolies, (2) franchise monopolies, (3) labor monopolies, (4) public mo- **Industrial monopolies:** nopolies, and (5) natural monopolies. Industrial monopolies may be subdivided into three classes, — those created by law, those created by organization, and those created by both law and organization.

Industrial monopolies are created primarily by law. They usually base their monopoly power on the control of natural resources, and this control is made *Created by law.* possible only through existing forms of property law. Thus, the control of natural resources, sanctioned by law, is characteristic of many industrial combinations. The development of modern industry has taught the manufacturer that his highest effectiveness can be maintained only when he has control of all the processes of production, from the raw material in the earth to the finished product ready for shipment. Such a monopoly control of resources is the most effective method of preventing competition, because the supply of natural resources is limited and the demand for them is always increasing. The International Harvester Company, which controls the forests from which it cuts the timber and the mines from which it digs the iron and coal for the manufacture of its machinery, is typical of a great group of integrated industries. Through natural

resource monopoly, the great industrial corporations are often enabled to fix monopoly prices.

Patents and copyrights constitute the second element in maintaining industrial monopolies created by law. Although less permanent than the monopoly of natural resources, patents and copyrights, while they exist, are more absolute. While there are natural resources of many kinds in different parts of the country, a patent once secured gives to the owner sole right for many years to manufacture that particular article. The same thing holds true of copyrights, trade-marks, patented processes, and the like. The bread formulas of the great baking companies, the cigar labels and trade-marks of the cigar manufacturers, the patented processes for making paint and other similar products, are all illustrations of a monopoly power based upon this form of legal control.

On the other hand, organization may be the primary factor in developing an industrial monopoly. The American Ice Company, for example, is dealing in a product which may be secured almost anywhere in the northern part of the United States; yet it is able, in certain cities, to charge what appears to be a monopoly price because it controls the machinery of ice delivery in those places. In the same way, largely through the control of the retail tobacco business, the original American Tobacco Company was enabled for many years to charge monopoly prices.

In most of the industrial combinations, however, both law and organization play a part. The United States Steel Corporation depends upon its natural resources, upon its formulas, and upon its effective business organization. Although this business

*Created by
organiza-
tion.*

*Created by
both.*

is one of the largest in the country, the Supreme Court of the United States in 1920 declared it was not an illegal combination. The court showed that mere size was not sufficient to constitute a monopoly in restraint of trade, and declared that the existence of other competing companies proved that the United States Steel Corporation did not have the absolute power to fix the price of its product.

The second form of monopoly, a monopoly through franchise, is absolute. If the franchise is perpetual, the monopoly is likewise perpetual. Even though **Franchise** provisions are made in franchises to limit the **monopolies:** prices which shall be charged for services, monopoly power still exists because the corporation may fix the price above a competitive level. This kind of monopoly usually grants the privilege of furnishing transportation, power, or light.

The greatest form of franchise monopoly is the railroad. Enough has been said to show that railroads are essentially monopolies, and to show that, because of their *Transportation.* right of eminent domain and their control over the district through which they pass, they are enabled in the absence of governmental restraint to fix monopoly prices, — exacting “all that the traffic will bear.” There was formerly no better illustration in the country of the fixing of monopoly price than that furnished by the railroad industry. It is for this very reason that the federal government now supervises the making of railroad rates. Heretofore, the predominant factor affecting the price of railroad transportation, in the absence of some form of competition, has always been the price that people were willing to pay.

Suburban electric trolley lines are assuming a position of

greater importance in the group of franchise monopolies. Therefore, as interurban transportation develops, the franchises secured by the present interurban companies will give them almost as great monopoly power as that formerly possessed by the railroads. It is in cities, however, that the franchise monopoly of transportation assumes very great importance. Trolley lines, subways, and 'bus companies often possess great monopoly power. For example, in a city of one million and a half, the competitive cost of transportation perhaps does not exceed three or four cents per passenger, yet the actual price paid by the passenger is usually from five to eight cents. This difference between the price paid and the competitive price represents the extent of the monopoly power.

The other leading form of municipal franchise monopoly — the monopoly over power and light — is chiefly seen in the control of electricity and gas. Water power is being gradually converted into electric power, which is transported sometimes as far as two hundred and fifty miles. The widespread use of coal prevents the power companies from exercising their real monopoly power, but in the course of the century the diminution of the coal supply will increase the monopoly of the holders of water-power franchises. Light and telephone service are also furnished through franchise monopolies. Companies carry on these businesses under franchises of long duration by means of which, in the absence of public restraint, they are enabled to charge prices that are considerably higher than they would be under conditions of pure competition.

Labor monopolies may be in the form of personal monopoly or monopoly of organization. In both cases, they aim

to fix the price of labor. Personal monopoly, which is the result of special ability or training, is in very distinct contrast to the monopoly of organization which is the result of coöperative effort. Personal monopoly demands a high salary for the individual, while monopoly of organization secures standardized wages, and proper working conditions, for the members of the group.

Labor
monopolies:
Personal.

The trade-union principle is necessarily monopolistic; that is, it attempts to fix wages without regard to competition. The object of the union is so to organize and control the supply of labor that competition will be impossible. Thus, a price will be fixed for labor, which will represent the monopoly power of the organization rather than the productive capacity of the individual members of the union, or the competitive wage which would be fixed if each union member was bargaining individually for himself. As in the case of railroads, the principle which dominates union activity is to charge "all that the traffic will bear." For example, the building trade-unions, which have a great monopoly power, command a much higher wage than some of the more skilled operators in the tailoring trades, where unions are weak and monopoly power comparatively small. In the first case, the supply of laborers has always been limited; in the second case, hordes of immigrants have for many years overloaded the market and made a competitive wage possible. Since labor has been organized on national and international lines, it has greatly enlarged its monopoly power and increased the possibility of controlling its price.

Organization monopoly.

Public monopolies may be either municipal, state, or national. The public municipal monopolies deal with trans-

portation, water, light, the control of sanitation and health, and provision for police and fire protection. The state **Public monopolies.** monopolies are monopolies of license fees, corporation fees, charter granting, and the like. The national monopolies include the carrying of mails, the printing of documents, the building of irrigation dams, and other activities which the government may and does assume. Therefore, in these monopolies, prices necessarily vary from the competitive rate. In fact, the prices for some government services are considerably below the competitive rate. The essential factor in monopoly is, therefore, not the fixing of high price through monopoly power, but the fixing of any price through monopoly power.

Like public monopolies, natural monopolies really constitute another cross-classification of monopolies previously mentioned. **Natural monopolies.** The determining quality of natural monopolies arises (1) from the naturally limited supply of certain raw materials of industry, and (2) from the inherent nature of certain business enterprises. Because of the limited supply of coal, petroleum, and other mineral deposits essential to industry, it is possible for organizations to secure a practical monopoly of such resources. When this occurs, a natural monopoly arises. Such a monopoly is found in the control by certain interests of the larger part of the anthracite coal beds of Pennsylvania. Because of this control, the owners of these mines are enabled to fix the price of coal at a point far above the competitive level. Another kind of natural monopoly is that which arises from the peculiar nature of the business itself. Of such a character are railroads, telegraph and telephone companies, street car lines, water and light companies, and similar businesses. In such enterprises it is found that the

very nature of the business is antagonistic to competition. The original cost of construction is so great in these cases that it is usually a waste of capital to duplicate the work already accomplished. For this reason the first successful company in the field enjoys the natural monopoly of performing the service. Since it is useless in these cases to rely upon competition as a determinant of price, it is necessary, in the interest of public welfare, for the government to determine the limits of the monopoly power of such combinations.

The number of ways in which monopoly power is expressed in monopoly price is constantly increasing; and the problem of monopoly is, therefore, of constantly greater concern to the modern state. The conclusion.

In a monopoly régime, the ordinary laws of price are largely suspended. The usual law of demand and supply is, for the time being, thrown into the background; and, in the presence of monopoly, a peculiar condition of affairs exists whereby price is determined not so much through competition as through some form of monopoly power. Under such circumstances, therefore, it becomes imperative for public authority to act in the interest of social welfare.

QUESTIONS FOR RECITATION

1. Define monopoly power. Explain its importance in America to-day.
2. How may the consumer limit the exercise of monopoly power on the part of the producer and the distributor of goods? Give some examples.
3. During, and after, the World War how was the power of substitution exercised?
4. When prices are unusually or exorbitantly high, how may this power be utilized by the consumer for his own good? What are its limitations?

5. Is mere size, or "bigness," essential to monopoly power in an organization? Prove your position.
6. What do industrial monopolies rest upon? Classify them; give an example of each.
7. Why is the control of natural resources important to an industrial monopoly?
8. Why is organization important?
9. What is the effect of patents and copyrights? Are they justifiable? Why?
10. Explain the meaning of franchise monopolies. Name the different kinds.
11. Discuss the effect of franchise monopolies. How should they be limited?
12. How would car fares be affected by the restoration of the principle of competition? Why do we not return to this principle?
13. What is the remedy for exorbitant charges for public utilities?
14. Explain the monopoly power exercised by labor. How does this affect the prices of goods?
15. Name some public monopolies.
16. How do public monopolies differ from private monopolies in regard to price fixing?
17. What is meant by natural monopolies? Give some examples.
18. Would you say that, to-day, all prices are determined by the theoretical laws of value? State your reasons.

PROBLEMS FOR DISCUSSION

1. How old is the problem of monopoly?
2. Outline the different kinds of monopolies.
3. Mention some monopolies of which you have knowledge, and explain what monopoly advantages they enjoy.
4. How is monopoly price determined?
5. Explain the difference between monopoly price and competitive price.
6. State the law of monopoly price.
7. What advantages are claimed for public ownership of natural monopolies?

8. Should the government attempt to regulate price when a monopoly is shown to exist? Explain the possible danger.

9. Is it desirable in the government to allow a monopoly to charge different net prices for the same commodity?

10. What relation should, in the interest of public welfare, be established between monopoly and price?

11. Are all monopolies trusts? Are all trusts monopolies? Why?

12. How may the problem of monopoly in America be solved?

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CHAPTER XXXIV

MONEY PROBLEMS

- I. Primitive method of exchange
 1. Barter
 2. Difficulties of barter
- II. Modern method of exchange
 1. Why money is necessary
 2. Uses of money :
 - a. Measure of value
 - b. Medium of exchange
 - c. Standard of deferred payments
 3. Characteristics of money
- III. Kinds of money
 1. Early forms
 2. Metallic money :
 - a. Gold and silver
 - b. Currency Act of 1900
 - c. Gresham's law
 3. Paper money :
 - a. Advantages and disadvantages
 - b. Kinds of paper money
 - c. Fiat money
- IV. Quantity of money
 1. Prices and values
 2. Money and prices
 3. Money and goods
 4. The outlook

Primitive Method of Exchange.— In primitive communities exchange is accomplished without the use of

money, by means of barter. For example, if to-day you were to take a trip to Alaska and attempt to buy frozen fish from a native, you would be compelled to give gold dust in exchange for the fish. If the fisherwoman demanded a little more than you offered for a particular fish, you would add to the gold dust grain by grain, until you finally reached a quantity satisfactory to both. If you desired an additional fish, you would be compelled to go through exactly the same process, — the amount of gold dust varying each time with the size and character of the fish.

Barter.

In the above illustration the process of barter was rather easily accomplished. If one person has gold dust and another person has fish, and both wish to exchange, some sort of transfer can be effected.

Difficulties of barter.

But suppose one man has bearskins and another has fish, and neither desire what the other has, the problem of exchange becomes more complicated. Barter is inadequate because it is extremely difficult to find two persons each having exactly what the other desires, and each willing to part with his possession; and even when these conditions have been met, it is still necessary that an agreement be reached as to the relative values of the goods under consideration.

Modern Method of Exchange. — In modern society, some other method of exchange becomes imperative. No community in which the exchange of commodities is a difficult and cumbersome process can advance to any considerable degree of civilization. A simple and effective instrument of exchange is as necessary to the progress and welfare of mankind as are improvements in the process of production itself.

Why money is necessary.

Therefore, man makes use of money as a convenient means of exchanging one commodity for another. Money is not an end in itself, but merely a means of securing what is wanted through the process of exchange.

Money serves two fundamentally useful purposes, and fulfills an important secondary function. In the first place, money serves as a common measure of value

Uses of money: because it is used as a medium for the expression of value in terms of price. Under the discussion of "Value and Price" we have seen the impracticability of attempting to gauge the values of various commodities in terms of each other. We cannot measure the value of an automobile in terms of a motor boat, or *vice versa*. We must have some common measure of value to which we can refer the values of all economic goods. Money, in civilized communities, has come to be the commodity which serves the purpose of measuring the values of all other commodities. Thus, we say the automobile is valued at \$2000 and the motor boat at \$1500.

Measure of value.

Not only does money serve as a common denominator of value, but, as already stated, it is also used as a medium of exchange. These two functions are equally important and mutually interdependent. When the value of a commodity is universally recognized, and when this commodity serves as a measure of the values of other commodities, the article so used naturally becomes a medium for the exchange of all other economic goods. Hence, money has become the means whereby the shoemaker exchanges his shoes for food; the tailor, his clothes for furniture; the steel manufacturer, his steel for a palatial residence. In short, by the use of money, every producer

Medium of exchange.

exchanges his particular commodity for what he requires to sustain and enjoy life.

Because money is a measure of value, it is also used as a standard for the future payment of present obligations. This function of money is described as a "standard of deferred payments." In order to legalize this use of money, governments usually confer upon it the quality of *legal tender*. Under these conditions, the money so described as legal tender must be accepted in payment of debts. It will readily be seen that such a device is necessary to modern business life. When a man contracts a debt to-day, payable in five years, he must know in what manner his debt may be legally discharged at the end of that period. Money measures the extent of his obligation and constitutes the means by which it is cancelled.

In order that a commodity may be used as money, it must possess certain definite characteristics. In the first place, money must have value as a commodity; and furthermore, this value must be generally recognized and comparatively stable. Of course, since money has a commodity value, its value will not be absolutely stable, but will vary in accordance with the law of supply and demand determining all commodity values. This means that when the commodity used as money is plentiful, and other commodities are relatively scarce, the value of the money commodity will decline. However, in the long run, the value of money must be comparatively stable. It is equally important that money should be durable, and divisible into small parts. Without durability there can be no lasting value; and without divisibility, it is impossible to secure coins of small value

for the ordinary exchanges of everyday life. Furthermore, money must be portable. In modern civilizations this quality is especially important because exchanges are so frequent and are effected at such great distances. A bulky commodity may have great value and yet fail, in this important respect, to meet the requirements of money.

Kinds of Money. — In primitive communities, many things were used as money which lacked one or more of these qualities. For example, Indian “wampum” was of no great value; and the cattle used as money, centuries ago in Europe, would not to-day be considered portable. In the same manner wheat, although having universal value, would not make good money because of its destructibility and great bulk. Therefore, men have come to employ some form of metal as money. In early societies, as in Sparta, iron was used; and in other places copper was employed.

To-day gold and silver fill the requirements of money much more perfectly than any of the other metals. Besides being valuable, portable, and durable, they are easily divisible into small parts, each one of which possesses considerable value. To facilitate the use of gold and silver as money and to standardize the value of the amounts used, the government buys gold and silver bullion and converts it into small coins. These coins are stamped by the government and their value is guaranteed. In the United States, according to the Act of 1878, the dollar is equal to 23.22 grains of pure gold, or 371.25 grains of pure silver. In each case, in order to make the coin more durable, alloy is added so that the “standard weight” of the gold dollar is 25.8 grains, while that of the silver dollar is 412.50 grains. Thus me-

**Metallic
money:**
*Gold and
silver.*

tallic money is simply gold or silver converted into a special form. Therefore, if money, as compared with goods, is plentiful, that is, if gold and silver are plentiful, its value decreases as would that of any other commodity. Since its value decreases, a particular coin is able to purchase less; and, therefore, there is a general rise in prices. On the other hand, should the supply of gold and silver decrease and money become scarce, as compared with other goods, its value would increase in proportion, and there would be a resulting fall in prices.

At the close of the nineteenth century, in order to standardize the fluctuating market values of gold and silver, the United States Congress passed the Gold *Currency* Standard Act of March 14, 1900. The passage *Act of 1900.* of this act marked the culmination of a nation-wide discussion of the money question. The difficulty in the situation arose from the steady decline in the market value of silver in terms of gold. Toward the close of the century the old ratio between the two metals of sixteen to one had fallen approximately to thirty-two to one. That is, at that time, the commodity value of silver, in terms of gold, was just about one-half of what it was in the early part of the nineteenth century. To insure the financial integrity of the United States, both at home and abroad, Congress passed the Act of 1900 which expressly states that the gold dollar shall be the standard of value in this country, and that all other kinds of money shall be maintained at a parity with gold. This act also provided for the maintenance of a special reserve fund of \$150,000,000 in gold, or in gold and redeemed notes, for the redemption of "Greenbacks" or United States Notes. This act further provided for the coinage of a sufficient quantity of silver dollars equal

to the amount of the Treasury notes of 1890 or the so-called Sherman notes. Since 1904, however, the United States has ceased coining silver dollars.

By establishing a single-standard monetary system, and by requiring that the value of any dollar must be equal to the value of the gold in a gold dollar, the Act of 1900 eliminates the great danger sometimes coincident with bimetallism, viz., the operation of Gresham's law. Sir Thomas Gresham, who was Queen Elizabeth's minister of finance, called attention to the fact that when two units of different kinds of money of the same nominal value circulate as legal tender, the cheaper unit forces the dearer unit out of circulation. For example, under the bimetallic system, because of the fluctuating market values of gold and silver, the silver in the silver dollar may, at any given moment, be of less value than the gold in the gold dollar. Under these circumstances, gold dollars are melted into bullion and sold at the market price for use in the arts and crafts. This means that the silver dollar remains in circulation for the payment of debts, and illustrates the law of Sir Thomas Gresham that "bad money drives out good money."

Metallic money is a great step beyond barter. It standardizes values and removes the disadvantages connected with individual bargaining. On the other hand, metallic money has certain obvious disadvantages. It is bulky, clumsy to handle, and easily lost. These objections render metallic money less desirable than an advanced form of money known as convertible paper money, which is used side by side with metallic money in civilized societies. Paper money is a promise to pay, and so long as this promise is

**Paper
money:**

*Advantages
and dis-
advantages.*

kept, it is as good as metallic money. In fact, it has some advantages over metallic money. It is more easily transported, less bulky, and much more readily transferred from one individual to another. On the other hand, it is more easily debased. During the French Revolution, during the American Revolution, in the Southern states during the Civil War, and during the recent World War, paper money was issued in such quantities and became so debased that it required huge sums to purchase ordinary commodities. Nevertheless, if paper money is issued and guaranteed by a wisely directed government, its advantages over metallic money are so great as to render it far more desirable.

In the United States there are several kinds of paper money, but these may be generally grouped under two heads: (1) the notes of the national banks *Kinds of paper money.* and those of the Federal Reserve banks, and (2) the notes and certificates of the Federal government. The national bank notes and the Federal Reserve bank notes are bond-secured notes, that is, they are issued with United States bonds as security. For purposes of classification, the national banks are divided into three groups, — “country banks,” reserve city banks, and central reserve city banks. Each one of these is required by law to maintain a definite reserve amounting to a fixed percentage of its deposits. The paper money of the Federal government is also of several kinds. It includes gold and silver certificates, and United States notes or “Greenbacks” amounting to about \$347,000,000. These notes are promises to pay on demand and they are protected by a reserve fund of the Federal government which is supposed to be sufficient to meet any ordinary demands. Gold and silver certificates are redeemable into coin at any time.

Paper money may take the extreme form of fiat money. It is sometimes asserted that the government may take paper, stamp it, and issue it as money to be accepted as legal tender in payment of debt. Such *Fiat money.* was the position in 1876 of the Greenback party and, in more recent years, of the Populist party. The fallacy of this proposition ought to be self-evident. We have seen that the basis of the stability of the financial system of the United States depends upon the fact that all forms of money are interchangeable, either directly or indirectly, with gold. This means that all forms of money are maintained at a parity with gold, and such could not be the case were unlimited quantities of paper money issued without regard to the gold reserve. Cheap money would most assuredly drive out dear money, and prices would rise by leaps and bounds. The recent experience of European countries in the World War testifies to the truth of this assertion. This fact, however, must not be construed to mean that governments may not issue *limited* quantities of paper money, even when such money is not immediately redeemable in coin.

Quantity of Money. — It will be observed that metallic money is spoken of as a commodity, exactly like pears or apples. This is true, because money is merely some form of metal which is as much an economic good as oil or coal. In the United States, it represents gold. Now since gold is a commodity, it is subject to the same law of value as any other commodity. That is; if its supply increases in a greater proportion than the demand, its value will decrease correspondingly. Under these circumstances, therefore, instead of pears being worth, let us say, two cents, they may now be worth three cents; and

Prices and values.

the prices of all other goods will rise similarly, because the value of gold (or money) has fallen. Conversely, if the supply of gold diminishes as compared with other goods, the prices of commodities will fall because the value of gold has risen. Consequently, a general rise or a general fall of prices is possible. On the other hand, there can be no general rise or general fall of values, because value represents the purchasing power of a commodity; that is, a relation between two commodities. If, therefore, the value of one of these goods rises, the value of the other must fall. If a pear formerly exchanged for two apples, and now exchanges for three, the value of the one has increased at the expense of the other. Therefore, there can be no general rise or fall in all values.

The effect of the volume of money on prices is well illustrated by the economic consequences of the World War. This war resulted in a tremendous increase in **Money and the amount of money** — both **metallic and prices.** paper — in circulation in this country. From July 1, 1914, to December 31, 1918, the value of gold imports into the United States amounted to \$1,767,900,000, while the value of the gold exports from this country amounted to \$738,900,000, leaving a net import of \$1,029,000,000 in gold. This sum did not take into account the gold and silver already in circulation in the country, nor the large issues of Federal Reserve notes that took place during that period. Furthermore, in 1920, it was estimated that the metallic money alone in this country amounted to a total of \$3,200,000,000, of which \$2,662,284,553 was gold. While the country's money was thus increasing at this rapid rate, vast quantities of goods were being exported abroad. Hence, money, because of its plentifulness, was decreasing

in value; while goods, because of their scarcity, were increasing in value. Because of this combination of circumstances, prices rose to an almost unprecedented level.

Fundamentally prices depend upon this simple relation between money and goods. Of course the factor of credit, **Money and goods.** which will be discussed in the next chapter, must also be taken into consideration, as well as the rapidity with which money circulates in the community. In addition, there are many minor and contributing causes of price fluctuations, such as extravagance, monopoly power, tariffs, trusts, trade unions, and similar factors in our economic life. But the fundamental basis of all changes in price level, whether upward or downward, lies in the relation between the quantity of money, on the one hand, and the quantity of goods on the other. When money is plentiful and goods are scarce, prices will rise; when money is scarce and goods are plentiful, prices will fall. In the United States the rise in prices following the World War was due more, perhaps, to the increase in money and credit than to the decrease in goods available for home consumption.

To enjoy normal prices it is necessary to establish an equilibrium between money and goods. Either money must **The outlook.** decrease in quantity and, thereby, increase in value; or goods must increase in quantity and, consequently, fall in value. This may be brought about through increased production, or through the medium of international trade, which will be discussed in a succeeding chapter, or through a device formulated by Professor Irving Fisher of Yale University. Professor Fisher has advocated the prevention of great price fluctuations through the process of "stabilizing the dollar." According to his plan, the

weight of the dollar would be virtually increased or decreased, from time to time, to offset the fall or rise in the value of gold. If this plan is found practicable, it may prove to furnish the solution of this constantly recurring problem.

QUESTIONS FOR RECITATION

1. Define barter; give examples.
2. What difficulties of a system of barter are overcome by the use of money?
3. Why is money necessary to civilized communities?
4. Name the two chief functions of money; explain each.
5. Explain the secondary function of money. Is this very important?
6. Name the qualities desirable in money. Show the importance of each.
7. Mention different things that have been used as money. Show the strength and weakness of each.
8. Why do gold and silver make the best money? Does the United States have a bimetallic monetary system?
9. What was the purpose of the Currency Act of 1900? Why was it passed? State its chief provisions.
10. Explain the meaning of Gresham's law.
11. What is paper money? Name the different kinds of paper money in the United States.
12. Explain the meaning of fiat money. Why is it ever advocated? Do you believe in it?
13. Can *all* prices rise? Why? Can *all* values rise? Why not?
14. How did the amount of money in the United States increase during the World War? What effect did this increase have upon prices?
15. Why should an increase in the quantity of money lower its value? Why should a decrease raise its value?
16. What factor, besides money, determines prices? How did the World War affect this other factor? What was the consequence?
17. Explain the different means by which reduction of prices is accomplished.

PROBLEMS FOR DISCUSSION

1. Would the exchange system be as complex as it is to-day if we depended mainly upon barter? Why not?
2. What would be the effect of barter upon the productive system?
3. Why does the man on the street exaggerate the importance of money? Show its true significance in modern life.
4. Would the following make good money: iron, wheat, diamonds, glass beads, seashells, beaver skins? If not, why not?
5. Are there any respects in which gold is superior as money to the above mentioned commodities? If so, explain the superiority in each case.
6. Contrast the relative merits of gold and silver as money.
7. Why are copper and nickel used for coins? What are money "tokens"?
8. What is coinage? What is the difference between "free coinage" and "gratuitous coinage"?
9. How does the government get the bullion which it stamps into coins?
10. Discuss the advantages of paper money. Its dangers.
11. Explain the evils of irredeemable paper money.
12. Discuss the quantity theory of the value of money.
13. Explain clearly the difference between a system of bimetallism and a single standard monetary system.
14. How would Gresham's law operate under bimetallism?
15. Had the United States adopted the "free silver" idea in 1896, how would prices have been affected?
16. How did the World War affect prices in the United States? Why?

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CHAPTER XXXV

CREDIT AND BANKING

I. Nature of credit

1. What it signifies
2. Individual transactions :
 - a. Book credit
 - b. Promissory notes
3. Banking operations :
 - a. Acceptance of checks
 - b. Bills of exchange
 - c. Issue of notes
 - d. Deposits and loans
 - e. Discount of notes
4. Advantages of credit
5. Preservation of credit

II. Banking system of United States

1. State banks
2. The National Bank Act :
 - a. Its advantages
 - b. Its defects
3. The Federal Reserve Act :
 - a. Its purpose
 - b. Its provisions
 - (1) Federal Reserve Board
 - (2) Federal Reserve Banks
 - (3) Reserves and rediscounts
 - (4) Issue of notes
 - (5) Element of elasticity
4. The conclusion

Nature of Credit. — Civilized communities make use of another instrument of exchange known as credit. Paper

money is, indeed, a form of credit; but to-day there are many other kinds of credit in use. In fact, so general has the use of credit become that many commercial transactions are carried on without the use of money at all. Credit, wherever it is employed, signifies confidence in business relations. It may be utilized not only by banks and corporations, but also by individuals. The "charge and send" of the modern department store is one of the most widely known forms of individual credit. In a primitive community, because of the uncertainty of the future, one cannot buy goods without paying for them directly. In a modern stable community, however, it is perfectly possible to buy goods "on credit." Where a man's position is known, his ability to fulfill his financial obligations is so well understood that his promise to meet them at the proper time is accepted as the temporary equivalent of actual payment.

Credit may thus be employed in individual transactions. In fact, to-day book credit is in general use throughout the United States, being characteristic of the small business operations of the corner grocery store as well as of the great commercial transactions of the modern department store. In the purchase of groceries, for example, you may buy goods for a whole month without paying a single cent; and, at the end of that time, the grocer sends you a bill. During the month, therefore, you have been receiving goods on book credit because the grocer had confidence in your ability to pay him. Likewise, in a great department store, hundreds of dollars' worth of goods are transferred from one person to another without the direct payment of money.

In the same manner an individual, in immediate payment

**What it
signifies.**

**Individual
transac-
tions:**
Book credit.

of an obligation, may make out his note or promise to pay at the end of a specified time. For example, if a merchant is short of present funds but desires to make an immediate purchase of goods, he gives his note *Promissory notes.* for sixty days in payment of the debt. He has not the money now, but expects to have it in the near future. The manufacturer of whom he buys the goods has such confidence in the merchant's ability to pay at the end of the time specified in the note that his promise is taken instead of money.

In credit transactions, however, banking institutions play by far the most important part. In modern society the bank is a credit factory, and its operations in *Banking operations:* turn depend upon the existence of confidence *Checks.* in business relations. Perhaps two-thirds of all business transactions are accomplished by means of bank credit. Take, for example, the enormous volume of business negotiated through the acceptance and cashing of checks by the banks. A check is an order on a bank to pay to a person money which he himself, or another, has on deposit in that bank. A lawyer, for example, wishing to pay his doctor's bill, does not give him actual money, but sends him a check for the required amount. The physician then takes this check to his own bank (which may or may not be the same as that of the lawyer) and either has it cashed or deposits it to his own credit. The lawyer does exactly the same thing when he receives a check from the physician in payment of professional services he has rendered. In case the lawyer and the doctor (and hundreds of others in like positions) have accounts at different institutions, the banks meet together in a "clearing house" and there settle whatever differences may exist between them by reason of

the varying amounts of their claims on each other. Through confidence in individuals and in banking institutions, the use of checks in business transactions has become a settled method of discharging financial obligations.

The bank also plays an important part in business transactions accomplished by means of bills of exchange, which *Bills of exchange.* greatly economize the use of money. Such a bill is a device whereby two individuals at a great distance from each other effect a payment of a debt without the transfer of money from one to the other. Suppose, for example, a New York importer buys goods to the value of \$50,000 (or £10,000) from a London exporter; and, at the same time, a New York exporter sells goods of the same value to a London importer. Instead of causing \$50,000 to be transported twice across the Atlantic, the bank of the New York exporter, to whom the money is due, buys from this exporter a bill of exchange for \$50,000. The New York importer through his bank buys this bill of exchange (which constitutes a claim on the London importer for £10,000), indorses it, and sends it to the London exporter who, in turn, presents it to the importer's bank in his own city and receives the £10,000 (or \$50,000) due him and already paid to the bank by the London importer. In this manner, by means of banking institutions and a bill of exchange, all four men have been satisfied without the necessity of transferring large sums of money across the water.

The issue and circulation of bank notes show clearly the confidence of the public in banking operations. A bank *Issue of notes.* note is simply a promise to pay based on the resources and credit of a banking institution. If the bank's resources are good, its notes circulate at par.

Its standing in the community rests upon the confidence which men place in its financial integrity and in its obedience to the law. In the United States, national bank notes are issued with government bonds as a basis; hence, their value is practically assured and no one hesitates to accept them.

The existence of confidence in banking institutions is also seen in their function of deposit. People deposit money in the bank for the purpose of saving it, *Deposits* or for the purpose of drawing checks against it. *and loans.*

In either case they have confidence in the bank. If they deposit for the purpose of saving, the bank uses the money commercially. It makes loans to industrial enterprises, receives interest in return, and then pays to the depositor a part of the interest thus received for the money used in industry. Banks accept check accounts because, by this means, they secure the use of surplus money. On the other hand, the depositor opens a check account in order to pay his bills through bank credit without the intervention of money transactions. The deposits are safeguarded by a thorough system of bank inspection, and by legal requirements concerning the amount of specie reserve.

Another leading function of banks is the discounting of notes, bills of exchange, and other forms of commercial paper. A merchant may have a note payable *Discount* in sixty days and wish to realize credit on this *of notes.* note without delay. By taking it to the bank, he secures, in return for it, money or credit good immediately. Naturally, for this accommodation he pays a discount, which is one of the chief sources of revenue to banking institutions. In a similar manner, banking houses discount bills of exchange.

From this description of credit and credit instruments, it is apparent that credit is one of the most important factors

Advantages of credit. in facilitating modern commercial transactions. The advantages of credit instruments may be

summarized as follows: (1) they economize the use of precious metals; (2) they save labor in the transfer of goods; (3) through deposits in banks, small savings may be amassed in large sums and converted into capital; (4) through banking institutions, large sums of money may be secured for commercial purposes in return for promises, made under certain specifications, to pay back the loans.

On the other hand, credit, when improperly employed, may lead to extravagance in consumption and to speculative enterprises in production. Its great peril

Its preservation. is inflation. Nevertheless, credit is one of the most effective tools in the hands of modern society. Its value is fundamental; its abuses incidental. Credit represents one of the great steps in the advance of commercial development. The urgent demand at the present time is for its preservation and safeguarding. Since credit is so essential to modern welfare and prosperity, every possible device should be employed to insure its integrity. Stringent legal regulations should be made and enforced in order to prevent that too extensive use of credit which leads to inflation and speculation.

The Banking System of the United States. — Aside from trust companies and savings banks, the functions of

State banks. which may be inferred from their titles, banking institutions in the United States are grouped chiefly under two heads, (1) state banks and (2) national banks. The first of these operate under state laws and therein lies their weakness. In early days lack of uniform-

ity in state requirements made it possible for banks in one state to operate under lax conditions not tolerated in another state. Hence a great difference arose in methods of administration. In some cases reckless and dishonest management resulted in altogether inadequate reserves, and in the issue of almost irredeemable notes. As a result frequent panics occurred, like those of 1837 and 1857, in which few state banks were able to maintain specie payment.

In 1863 Congress determined to remedy this situation and, at the same time, to meet the exigencies of Civil War by passing the National Bank Act of that year.

This provided for a new system of national banks, and laid down the rules for their organization, management, and inspection. By laying a prohibitory tax upon the issue of state bank notes, these notes were driven from circulation and replaced by national bank notes which, as we have seen, were secured by United States bonds and made redeemable on demand. By requiring each bank to keep on hand a cash reserve of a certain percentage of its deposits, the interests of the creditors were also protected.

**The
National
Bank Act:**
*Its
advantages.*

While this act marked a great improvement in the banking system of the United States, its operation proved that there was not sufficient elasticity in our currency system. Safety was provided at the expense of

Its defects.

elasticity. The volume of currency in a country should contract or expand according to the decrease or increase in the volume of legitimate commercial transactions. But the very uniformity of the requirements of the Act of 1863 prevented this contraction and expansion. Furthermore, this act did not provide sufficient centralization of govern-

mental authority over the entire banking system. Some central coördinating authority was necessary in order that the national banks might coöperate with one another in times of financial stress.

Accordingly, in December, 1913, Congress passed the Federal Reserve Act. This act attempts (1) to provide the machinery whereby a national bank can, at any given moment, provide the community which it serves with an amount of currency sufficient to meet its present legitimate needs; and (2) to provide a system of federal supervision whereby, through proper coöperation of the banks concerned, every bank in the system will be enabled to meet all its financial obligations, and to keep its promises to redeem its paper dollars in gold when presented for payment.

To accomplish these purposes, the Act creates a Federal Reserve Board of seven members made up of the Secretary of the Treasury, the Comptroller of the Currency, and five other members appointed by the President. Of these last five, two must be expert bankers, but are not permitted to have banking affiliations, or to own bank stock during their term of service. This board exercises final control over the operation of the entire system. It can force one regional bank to loan funds to another in times of financial stress; it can, in extraordinary circumstances, suspend the restrictions regarding the resources which regional banks are ordinarily required to hold; and it can, when necessary, remove directors of regional reserve banks.

For purposes of administration and to secure a more effective handling of reserve funds, the country is divided into twelve districts, in each of which is established a Fed-

eral Reserve Bank. These banks are purposely scattered throughout the country and are located in the following Federal Reserve cities: Boston, New York, Philadelphia, Cleveland, Richmond, Atlanta, Chicago, St. Louis, Minneapolis, Kansas City, Dallas, and San Francisco. The capital of a Federal Reserve Bank is furnished by the member-banks in each district, each one of which contributes a sum equal to six per cent of its capital and surplus combined. These member-banks are composed of national banks, which are compelled to join, and such state banks which elect to join the Federal Reserve System, by bringing their reserve requirements up to the standard set for national banks and by submitting to national examinations. Each member-bank keeps part of its funds on deposit in the Federal Reserve Bank of its district. The Federal Reserve Banks have been called "bankers' banks," because, aside from dealing in bills of exchange in the open market, they do not make loans to individuals directly and do not accept individual deposits.

The funds of reserves from member-banks, together with government moneys, make up the deposits of the Federal Reserve Banks. Each of these regional banks is required to keep a reserve of thirty-five per cent of its deposits, besides a forty per cent gold reserve behind the issue of Federal Reserve notes. The regional or Federal Banks may rediscount — that is, buy at a discount — the notes and other obligations to pay money held by the member-banks against individuals who have borrowed money, properly secured, from these local banks. That is, in return for the indorsed notes of the member-bank, the Federal Reserve Bank sends it cash or money.

Upon the security of the rediscounted paper, or in ex-

change for gold, the Federal Reserve Banks may issue Federal Reserve notes. That is, in the exchange described above, the member-banks may receive the required cash in the form of Federal Reserve notes. It is this provision of the Federal Reserve Act which insures elasticity to our currency system. The regional banks may also issue Federal Reserve *bank* notes, which are secured by government bonds deposited with the Treasury Department, in the same manner as national bank notes. The Act intends, however, that the national bank notes will be ultimately retired.

The element of elasticity in our currency system is provided chiefly through the Federal Reserve notes issued on the security of rediscounted paper. We have already remarked that the volume of currency should expand or contract with the volume of commercial transactions. Now, when business is brisk, the local banks will be lending large sums of money based on the personal notes of business men. These notes will then be rediscounted, that is, exchanged for Federal Reserve notes, which will then come into circulation as money. The more active business becomes, the greater will be the volume of currency. When business is slack, however, the local banks will cease so much lending, rediscounting will stop, and the volume of currency will not be further enlarged. Thus, theoretically, the supply of money becomes automatically adjusted to the demand for it.

The Federal Reserve system has thus materially improved the banking system of the United States. If there is any weakness to be feared in this system, it lies in the ease with which bank credit may be expanded and the difficulty with which it may be contracted.

The conclusion.

In other words, the danger of this system lies in inflation and high prices. During the World War, the volume of currency was expanded in accordance with national needs; but, in the period immediately following the war, the country suffered from too much credit inflation. In fact, in 1920, there were \$3,000,000,000 of Federal Reserve notes in circulation. For the entire success of this system, it is necessary to bring about a more speedy contraction of bank credit when the necessity for expansion has ceased. The Reserve Act, however, provides the basis for this contraction in two ways. In the first place, no Federal Reserve Bank may reissue the notes of another such bank, but must return them "for credit or redemption" to the bank issuing them. In this respect, therefore, contraction will depend upon the rapidity with which such notes find their way back to a Federal Reserve Bank. In the second place, bank credit may be checked by increasing the rates charged by the Federal Reserve Banks for rediscounting the notes of the member-banks. By making it less profitable for the local banks to lend money to individual business men, speculative enterprises may be discouraged. In November, 1919, a year after the close of the World War, the Federal Reserve Board began to exercise its powers in this direction by increasing the rediscount rates, and by enforcing the regulations concerning the normal reserves.

QUESTIONS FOR RECITATION

1. Define credit ; give an example.
2. Explain the meaning of book credit.
3. What is a promissory note? What is a check? What connection has the bank with either or both of these?
4. Explain just exactly what a bank is.

5. Explain clearly the function of a bill of exchange. Show how the bank enters into this transaction. Why does it do this?
6. Explain how banks are able to issue notes.
7. Why do banks accept deposits and make loans? How is this advantageous to all concerned?
8. Why do banks discount notes?
9. Summarize the advantages of bank credit.
10. May any evils result from the use of credit? How may they be remedied?
11. Why did state banks prove dangerous in the early history of our country?
12. What are national banks? Show their advantages over state banks.
13. Why was the Federal Reserve Act of 1913 passed? State its main purposes.
14. Are all national banks part of the Federal Reserve System? Are all state banks?
15. How many Federal Reserve Banks are there? Where are they located? Why are they called "bankers' banks"?
16. Outline the provisions of the Federal Reserve Act.
17. Explain a weakness in the Federal Reserve system. How may it be remedied?

PROBLEMS FOR DISCUSSION

1. Discuss the effect of credit upon the productiveness and accumulation of capital.
2. Explain the difference between individual credit transactions and banking operations.
3. Discuss the importance of the bank to the community; describe its chief functions.
4. Contrast trust companies, savings banks, state banks, and national banks.
5. What is the difference between a national bank note and a government bond? Should the latter circulate as money?
6. How are bank deposits protected? How are bank notes protected?
7. Explain what is meant by "wildcat" banks.

8. How has the United States prevented the issue of state bank notes? Why?
9. Why do national bank notes circulate at par? How is their value guaranteed?
10. What was the chief defect of the National Bank Act of 1863? When and how was this remedied?
11. Discuss the functions of the Federal Reserve Board.
12. Explain the difference between the Federal Reserve Bank and the member-banks. Explain the relations existing between them.
13. Explain how notes are rediscounted by Federal Reserve Banks.
14. What are Federal Reserve notes? Under what conditions are they issued? How is their value guaranteed?
15. What are Federal Reserve bank notes? What guarantees their value?
16. What is the effect of the issue of Federal Reserve notes? What may be the final result?
17. How may bank credit be contracted, when once inflated?

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CHAPTER XXXVI

MODERN FINANCE

- I. Evolution of finance
 - 1. Importance of funds
 - 2. How secured :
 - a.* At first
 - b.* At the present time :
 - (1) Through corporations
 - (2) Through "trust finance"
- II. How companies are formed
 - 1. A slate company :
 - a.* The "promoter" :
 - (1) His first steps
 - (2) His later activities
 - b.* The company organized :
 - (1) How accomplished
 - (2) How stocks are "floated"
 - 2. United States Steel Corporation :
 - a.* How formed
 - b.* Its capitalization
- III. Results of modern finance
 - 1. Chief advantages
 - 2. A great danger
 - 3. Other evils
 - 4. Conclusion

Evolution of Finance. — The latest development of credit as applied to industry appears in the financing of great business concerns. Credit is intimately connected with modern finance because, by means of it, the business

world is able to secure large sums of money with which to finance its propositions. To carry on any business whatsoever funds in some form are essential, because **Importance of funds.** they are needed to procure the necessary land, labor, and capital. Without funds, natural resources lie idle, labor is unemployed, and capital waits for investment. The procuring of these funds constitutes one of the chief duties of the business organizer.

To understand the origin of modern finance, it is necessary briefly to recapitulate the manner in which vast funds have been accumulated in this country. **How secured:** In the early part of the nineteenth century, **At first.** business was conducted largely on an individual, or partnership, basis. One man, with a small amount of capital, went into business for himself. Or, if he did not have sufficient funds, he went into partnership with two or three of his friends who entered into a mutual agreement and helped in the business management.

This simple method of securing funds, proving inadequate for the demands of modern business, was succeeded by the corporation, which possesses so many advantages over the partnership method of procuring **At present.** capital that it has completely revolutionized the system of business finance. From the standpoint of funds, the greatest advantage of the corporation method of doing business lies in the power of the board of directors to issue securities for providing the funds necessary to productive enterprises. These securities may be in the form of stocks or bonds. Stocks are certificates of investment upon which annual dividends are declared. Bonds are certificates of indebtedness which bear a definite rate of interest. The former represent invested wealth; the latter,

debts or obligations which must be ultimately discharged. Because immense funds for business undertakings are secured through these two means, the corporation idea marks a great advance in the development of modern finance.

The next step in the evolution of finance was brought about by the development of large scale production and the invention of that form of business organization known as the trust. Although the board of trustees (from which body we get the name "trust") has been declared illegal, its essential feature — the centralization of capital and business control — still exists in the form of the holding company. Instead of appointing a board of trustees which holds stock of other companies, the organizers of the trust form a new corporation. Here is the opportunity of amassing colossal sums of capital, and of having these enormous funds managed by central control. To bring about these results, questionable methods have often been employed and have given rise to the phrase "high finance." But "high finance" should not be confused with that legitimate "trust finance" which secures funds through perfected and advantageous business organization.

How Companies Are Formed. — To realize more clearly the nature of this kind of finance, let us examine the usual method of organizing an industrial company.

A slate company: Comparatively few people really understand the procedure involved in converting a business proposition into marketable securities through the medium of modern finance. Suppose in a region fifty miles square there is located a group of slate quarries capable of producing the only slate in the neighborhood. Here is a natural resource, furnishing an excellent basis for a com-

bination of interests, and requiring only that sufficient funds be secured for its development.

Looking over this field, the "promoter" — the man who organizes and directs combinations of capital — plans a definite proposition. After careful con- *The "promoter."* sideration of all aspects of the question, he concludes that it is possible to form a combination to control slate production in this region. He first goes to the bankers who in the past have assisted him in financing his enterprises, explains the situation to them, and asks for their coöperation. If they have confidence in the promoter, and if the undertaking appears profitable, they agree, in the event of the proposition proving desirable, to render him any necessary financial assistance.

Having thus secured this backing, the promoter, or his representative, proceeds into the slate region, and goes from quarry to quarry buying up options. That is, he secures for, perhaps, one thousand dollars the right to purchase for a stated sum a slate quarry at any time before the end of two years. If the promotion is successful, the promoter returns after a few months to his banking house and states that he has secured options on all the properties. He also makes a report concerning their capacity, the quality of their product, the possibility of their development, and the prospect of effecting economies.

If, at this stage, the proposition looks unfavorable, it is dropped. If, however, it seems feasible to organize a successful company, a charter is applied for and the company incorporated; stocks and *The company organized.* bonds are issued by it; and the options on the various slate properties are taken up. Perhaps these stocks and bonds are given to the owners of the slate

quarries in return for their properties. It may be, however, that the owners insist on cash payment. In this case, the stocks and bonds are taken by the banking house and "floated." This is done by the agents of the banking house traveling over the country, visiting financial institutions, trust companies, or individuals likely to buy such securities and offering for sale those of the newly organized company.

These securities may be listed on one or more stock exchanges. In that case, they are sold to the general public, if people choose to buy them in the usual way. By whatever method the promoter and his bank proceed, however, the ultimate aim of the company is to sell the securities to the public, organize the business on an efficient basis, and make it pay dividends on the securities issued. If the promoter has used good judgment, and if the company is not overcapitalized, the new corporation has a good chance of success. Confidence on the part of investors, as well as honesty on the part of the company, is absolutely essential to the process of successful promotion.

This description of the organization of a hypothetical company to control the slate business in a given locality has been paralleled a hundred times in the course of the last forty years. The organization of the United States Steel Corporation was, in a large way, an almost exact duplicate of the slate quarry example, except that the proposition to consolidate the steel interests was most welcome to the steel manufacturers themselves. Competition had been very severe. Numerous small trusts had been formed. The Morgan interests, well acquainted with this situation, undertook to organize a combination of all of the in-

United
States
Steel
Corporation:
*How
formed.*

dependent producers. Gradually the principal companies were consolidated, with the exception of the Carnegie Steel Company, which at first refused to combine. In reply to the trust's threats, the late Mr. Carnegie proposed to erect a steel plant on Lake Erie which would produce steel rails more cheaply than any plant the trust then owned. Eventually, however, the Carnegie plant was bought out at Carnegie's own price, approximately \$400,000,000.

At its inception, the steel trust was overcapitalized, because of the enormous prices which some of the consolidating firms received for their plants, and because of the great bonuses secured by the *Its capital-*
ization. promoters. However, the reconstruction of the plant and the purchase of the Tennessee Coal and Iron Company in 1907 established the trust on a strong basis. This, together with the reorganization of steel manufacturing, which the steel trust has effected, renders it very probable that at the present time the total capitalization of the trust (about two billion dollars) represents something like actual value.

Results of Modern Finance. — The advantages of modern finance are twofold. In the first place, the corporation, as financed by the modern banker, gives **Chief**
the aggressive business man an opportunity to **advantages.** secure large funds of capital. At the same time, the small investor is enabled to invest sums of capital in a large progressive business and thus becomes a participant in a successful enterprise. Neither of these transactions would be possible without the institution of credit. Stocks and bonds, which together form one of the most important kinds of credit instruments in modern industry, furnish a common basis for the small investor and the large indus-

trial enterpriser. Of course, the savings bank may occasionally intervene between these two; but, nevertheless, they finally come together through the medium of securities.

Financial methods, as employed by the holding company of to-day, have wrought wonderful changes in our financial and industrial system. Fifty years ago, the **A great danger.** Steel Trust would have been considered an impossibility, because it was generally believed that no single business concern could finance and manage so large an enterprise. Gradually, however, men learned how to integrate individual industries. This was considered, and rightly so, a wonderful achievement. It was followed, however, by the development of financial centralization, which permitted one management to control several integrated industries. By means of this financial control, it was quite possible, at one time, for effective power over our greatest industrial corporations to be centered in the hands of a half dozen powerful financiers. To check this centralizing tendency in our financial life, Congress in 1914 passed the Clayton Anti-trust Act. This act aims to prevent financial centralization by prohibiting "interlocking directorates"; that is, by making it illegal for an individual to serve as a director of two or more industrial corporations doing an interstate business, if one of these has a capital of over \$1,000,000, and if such corporations are natural competitors.

Other evils are incident to the system of modern finance. Chief among these are overcapitalization, "stock watering," **Other evils.** and public deception regarding the value of securities. Overcapitalization naturally follows from the process of "stock watering." This results from

the fact that the par value of the stock does not represent its real value. The difference between these two values is the "water" in the stock. It can readily be seen what injury is done to good business management, and therefore to the community, when attempts are made to pay dividends on an amount of wealth larger than that which is actually engaged in productive enterprise. Paper values are not real values. The tragedy of the New York, New Haven and Hartford Railroad Company bears eloquent witness to the fatal consequences of reckless financiering.

Every effort should, therefore, be made to preserve the legitimate character of modern finance. Finance is a development of credit and depends upon credit for accomplishing its purpose. No sanction should be given the methods of those financiers who, by their misrepresentations, serve to weaken public confidence. Their acts should be rigidly scrutinized and a sharp distinction drawn between legitimate and illegitimate financiering. Social welfare is largely dependent upon the maintenance of a high standard of integrity in the development of modern financial methods. Therefore, stringent laws should be passed to check reckless financiering, to supervise the issuance of securities, to prevent overcapitalization of corporations, and to protect, in whatever manner necessary, the rightful interests of the investor.

QUESTIONS FOR RECITATION

1. Explain the importance of funds to society.
2. Trace the evolution of finance from the days of the single employer to the rise of the trusts.
3. Define stocks and bonds. Explain the difference between them.

4. How do corporations secure funds?
5. What are the duties of a promoter?
6. Explain clearly how a new company is organized, and its securities put upon the market.
7. Who organized the United States Steel Corporation? How was it done?
8. Why was the United States Steel Corporation able to succeed, while the New York, New Haven and Hartford Railroad Company failed?
9. Describe the great benefits of modern finance.
10. What great danger at one time threatened the financial life of America? How has it been averted?
11. Explain the meaning of "stock watering" and overcapitalization. Why are they resorted to?
12. How may the interests of investors be properly protected?

PROBLEMS FOR DISCUSSION

1. Is money the only form of funds? Name some others.
2. Explain how funds are raised by modern business men.
3. Could you go to a bank to-day and raise funds for financing you through the university? Why not?
4. When a trust is organized, how are the necessary funds raised for purchasing the stock of the underlying companies?
5. Explain the steps by which a trust is organized.
6. What is meant by the "capitalization" of a trust?
7. On what bases may the amount of capitalization be determined?
8. Why are some doubtful companies ultimately successful, and why do others of like character fail?
9. Could large scale production be carried on without modern methods of financing?
10. Does "stock watering" harm the public? The investor? Why?
11. What are "blue sky" laws? Why are they passed?
12. What good has the modern financier accomplished? What harm has he sometimes done?

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CHAPTER XXXVII

INTERNATIONAL TRADE

- I. The underlying principles
 1. Why men trade
 2. How trade developed
 3. Foreign trade :
 - a. Its primary basis
 - b. The disturbing factors :
 - (1) Nationalism
 - (2) Commercial expansion
 - (3) Overproduction
 - c. American foreign trade :
 - (1) Chief exports and imports
 - (2) Balance of trade
- II. General features of foreign trade
 1. Its characteristics :
 - a. World markets
 - b. Standard prices
 - c. Method of payment :
 - (1) Bills of exchange
 - (2) Rate of exchange
 2. How it is restricted :
 - a. Chief kinds of restrictions
 - b. Protection :
 - (1) Its purpose
 - (2) Its advantages
 - (3) Its disadvantages
 - c. Free trade :
 - (1) Its benefits
 - (2) Its defect
 - d. The conclusion

Of the various problems that arise in a discussion of the exchange of wealth, none is more important than the trade relations of civilized communities. In fact, foreign trade is inseparably connected with modern industrial life.

The Underlying Principles. — It seems a truism to say that, in the present stage of the world's economic development, an individual cannot produce a sufficient variety of economic goods to satisfy his manifold wants. Yet this fact is at the basis of all trade. This is an age of specialization in production and of minute subdivision in labor. For example, one man or a group of men produces nothing but woolen goods; another confines his attention exclusively to the production of foodstuffs; while a third concentrates all his time and effort upon the construction of building materials. If each man, therefore, consumed only what he produced, many of his wants would remain unsatisfied. He must consequently trade with his fellow men and secure from them, in exchange for the results of his own labor, the commodities which they produce that are essential to his happiness. In modern communities, individual and social welfare is absolutely conditioned upon the free interchange of commodities.

In primitive societies, this problem of exchange was comparatively insignificant. Every individual produced, in some fashion, all that was absolutely needed to sustain life, and, his wants being few and undeveloped, he was not dependent upon the labor of his fellow man. To-day, however, the trade relations of society have developed to such an extent that nations war upon each other in order to secure the benefits accruing from wider trade relationships. Beginning with insignifi-

cant local exchanges, the sphere of trade gradually widened until it extended to a free interchange of commodities produced within the same country. Thus domestic trade was established. But, as the facilities for transportation developed, a nation's trade expanded beyond the confines of its own borders, until domestic trade was supplemented by foreign trade. In this way, there was inaugurated international trade which now plays such an important part in the life of all great commercial nations. In fact, the existence of nations sometimes depends upon the preservation of their international trade. Should England, for example, be cut off from her trade connections with the rest of the world, her people would suffer severely from the curtailment of the food supply and many raw materials of industry.

The underlying economic principle of international trade arises primarily from the varying conditions of production, and from the fact that certain parts of the world are geographically fitted for the production of particular commodities. For example, coffee grows well in Brazil; tea is cultivated in China; and cotton is cheaply grown in the southern part of the United States. In a similar manner, Canada, the United States, South Africa, and Australia easily produce wheat; while northwestern Europe, by reason of its mineral deposits, is peculiarly suited to manufacturing. Thus, each of these areas has a specialty for which it might well seem that nature intended it. This local fitness for production, due to favorable physical conditions, is the primary basis for international trade. To-day, in spite of strong national prejudices, this principle of international exchange asserts itself.

Foreign
trade:

*Its primary
basis.*

The chief barrier against the free interchange of commodities among nations, each one of which is especially fitted for the production of particular goods, lies in this feeling of national solidarity. So long as the world is organized along the lines of nationalism, no rigid and absolute specialization in production is probable. That is, every nation, as a matter of political policy, will attempt to produce, or in some manner to command, the goods essential to its continued national independence. In addition to the influence of national solidarity, two other factors interfere with the full utilization of the physical basis for international trade. In the first place, a commercially expanding nation with large resources and limited markets aims to secure additional trade in spite of the law of local fitness. For this reason, although northwestern Europe is peculiarly suited to manufacturing, many large American trusts enter European markets and, notwithstanding the extra cost of transportation, sell their goods at a profit in these markets. In the second place, surplus products are often "dumped" in a foreign market. That is, when a manufacturer finds that he has produced more goods than can be sold at home, he sells them abroad at greatly reduced prices. In all these cases, the principle of local fitness has been violated.

In order to ascertain whether this principle is generally observed in American foreign trade, let us examine the character of American exports and imports. Although the amount of manufactured goods which the United States exports is gradually increasing, agricultural products have always made up the bulk of our exports. Chief among these exports are cotton, meat and dairy products, iron and steel manufactures, bread-

*The
disturbing
factors.*

*American
foreign
trade.*

stuffs, copper and its products, mineral oils, live stock, tobacco, agricultural implements, cotton manufactures and leather products. On the other hand, the imports of the United States consist largely of sugar, coffee, chemicals, drugs and dyestuffs, raw silk, India rubber, wool, jewelry and precious stones, and some copper and iron manufactures. In a general way, therefore, the United States exports what the country is well fitted to produce and imports what other countries are especially able to turn out. Although there are some striking exceptions to the rule, the trade relations of the United States may be said, for the most part, to conform to this general economic principle.

The World War stimulated American foreign trade enormously, and exercised a potent influence upon what is known as the "balance of trade." This balance of trade represents the difference between a nation's volume of exports and imports. From 1910 to 1919 the annual exports of the United States to Europe increased from approximately one and three-fourths billion dollars to more than seven billion dollars, while during the same period our annual imports from Europe increased from about one and a half billion to over three billion dollars. Thus our favorable balance of trade jumped from \$250,000,000 in 1910 to \$4,000,000,000 in 1919. Shortly after the close of the war the balance of trade in favor of the United States rose for a time to even higher figures. This meant that the excess of goods sent to Europe had to be paid for in either gold or credit. Huge loans were raised for this purpose; but, in the end, a large part of the obligation had to be discharged through the payment of money. The influx of gold into the country piled up prices still higher and added to the already heavy burden of the in-

creased cost of living. We have already seen that, when money is plentiful and goods are relatively scarce, prices are high. To effect an equilibrium, exports and imports must more nearly balance one another so that the gold supply may shrink and goods become more plentiful.

General Features of Foreign Trade. — To-day international trade has taken on some well-defined characteristics. In the first place, certain localities have developed into world markets, that is, definite places have become centers of trade for particular commodities. For example, Chicago and Liverpool are world markets for wheat. Each of these markets feels the effect of adverse conditions in the other. If, therefore, there should be a wheat famine in Europe and an abundant crop in the United States, the export trade of the United States in this commodity would increase enormously. On the other hand, if conditions were reversed, American exports would fall off.

In this manner, prices of standard commodities are fixed in world markets, because the condition of one market offsets that of the other and usually prevents great price fluctuations. While, normally, prices largely depend on conditions of production, they themselves determine the movement of international trade, and this, in turn, brings about an equilibrium in price. Thus, in response to the difference in prices at two centers, wheat may be shipped from one country to another, — a movement which will ultimately result in this difference in price being largely eliminated. With increased exportation (demand), low prices gradually rise; and with increased importation (supply), high prices gradually fall. The cable, the telegraph, and telephone easily make known these

Its characteristics:

World markets.

Standard prices.

differences and a gradual equilibrium in price is ultimately effected.

Another unique feature of international trade is the fact that it is carried on largely without the use of money.

*Method of
payment.*

The exports of a country are used chiefly to pay for its imports. If the two amounts always balanced, little money would be needed in international trade transactions. When exports are greater than imports, however, some method of payment must be devised. For example, if, during a certain period, the United States exports to England \$100,000,000 worth of goods and imports from England \$75,000,000 worth of goods, England at the end of that time owes the United States \$25,000,000. As we have seen in a previous chapter, the usual method of paying this balance of trade is through bills of exchange which make the actual transportation of large sums of money across the water unnecessary. Occasionally, however, gold may be shipped from one country to another either to settle a trade balance, or to obviate the payment of high rates on bills of exchange.

At this point it may be well to explain what is meant by the rate of exchange. Ordinarily, the pound sterling exchanges for \$4.866 in American gold. In normal and peaceful times, the exchange is often effected at par, or with but a slight fluctuation of two or three cents above or below par. That is, the pound may exchange for \$4.88 or for \$4.84. When trade relations are greatly disturbed through war or some other abnormal condition, the difference in the relative values of these two units may, however, vary considerably; and, in that event, the rate of exchange may fall to an unprecedented degree. For example, shortly after the World War the pound sterling, for a brief period,

exchanged for only \$3.25. Under these circumstances, England was practically forced for a time to stop purchasing goods in American markets. The rate of exchange was so disadvantageous to England that she could not afford to pay for goods in a market where the value of the pound had fallen so low. However, this situation eventually remedies itself by forcing an equilibrium in trade conditions. With low rates of exchange, exports fall off and imports increase, so that gold becomes less plentiful and commodity prices gradually fall.

In one form or another, certain restrictions have always been placed on international trade. In America, the Navigation Acts of Parliament were followed by the tariff acts of our own government, which ^{Its restrictions:} serve indirectly to restrict freedom of commerce. Of course, a tariff for revenue only is ^{Chief kinds.} but a slight restriction on international trade. However, a protective tariff forms a considerably greater obstruction to commerce, while retaliatory tariffs and tariffs so high as to become prohibitive prove effectual barriers to the free development of international trade relations.

The purpose of restricting commerce through a protective tariff is obvious. Suppose, for example, a foreign manufacturer can produce, transport, and sell steel rails to an American firm at a rate lower than that ^{Protection.} of the American steel producer. Under these circumstances, the American manufacturer will either have to invent a cheaper process of manufacture or be forced out of business. The first he may be unable to do. Therefore, to protect him, the government passes a tariff act which makes it possible for him to manufacture steel rails profitably without being undersold in his own market.

In order to develop home manufactures, cheaper foreign goods are thus displaced by more expensive native products. Whenever the manufacturers of one nation are unable to compete successfully with those of another, artificial barriers in the form of tariff laws may be enacted for their protection.

A policy of protection thus attracts labor and capital to employments that would otherwise be unprofitable. Since the amount of the tariff levied is at least sufficient to cover the difference between the cost of production at home and abroad, such a policy makes possible the development of "infant industries." Without this protection, the growing industries of a country would succumb under the pressure of foreign competition. Furthermore, a protective tariff makes it possible, in the industries protected, to maintain the same level of wages as exists in other occupations. Since the protection afforded, however, applies practically only to manufacturing, mining, and in some special cases, agricultural industries, it cannot be said that a protective tariff is the cause of a generally high level of wages. So far as wages are concerned, the tariff affects, perhaps, only one-tenth of the laboring population of the United States.

As opposed to the benefits derived from a system of protection, a tariff policy entails certain disadvantages. Besides increasing the cost of production, such a policy may decrease the sum total of wealth produced in a community. This situation follows from the fact that, without the artificial protection, labor and capital would flow into those channels of production which offer naturally the greater returns. The higher prices charged for the domestic goods, produced in competition with foreign manufacturers,

also add greatly to the burden placed on the consumer. In other words the home manufacturer frequently derives great profits at the expense of the general public. Furthermore, the manufacturer often attempts to maintain the high level of profits, secured through protection, by resorting to practices of favoritism and "log-rolling" in politics. Thus, the tariff has sometimes developed into an instrument which is used, not for stimulating infant industries, but for aiding industries that have become almost monopolistic. Under these circumstances, the most equitable method of regulating a protective tariff is probably found in the establishment of a non-partisan Tariff Commission, which has the power to fix the duties in accordance with the actual needs of the industries of the country.

A free trade policy attempts to remove the restrictions on international trade, except in so far as they may be necessary for purposes of revenue. The object of such restrictions is not to protect industries, *Free trade.* but to raise revenue. When taxes are levied on imports, they are therefore usually laid upon non-competitive products. Such a policy of free trade results in the production of more goods, cheaper goods, and perhaps better goods. Increased production results from the fact that, under a system of free trade, labor and capital always seek those industries having the greatest comparative advantages. Under these circumstances, the goods produced are likely to be of superior quality; and, because they are tax-free, they are comparatively cheap in price. Free trade is the logical consequence of the doctrine of local fitness, and the result of a world-wide geographical application of the principle of division of labor.

From a political standpoint, however, the doctrine of

free trade has one serious defect which, in the minds of many statesmen, outweighs all its benefits. Free trade assumes a permanent state of normal and peaceful relations existing among all nations. This theory, like that of universal peace, is adapted to an ideal and perfect state of human nature. Protection, on the other hand, is based upon the doctrine of nationalism, and is adapted to the stern realities of everyday life. Protection gives to a nation, equipped with proper natural resources, the power to develop itself into a complete, self-sustaining economic unit. Free trade makes one nation dependent upon another for many necessities of life; protection enables a nation to be strong and powerful in times of international crises. To make clear our meaning, we have but to recall the life-and-death struggle through which the world has lately passed, and to realize how much depended, in that conflict, upon a nation's ability to be supremely self-contained and self-supporting in all vital respects.

In conclusion, we may reiterate that the principle of protection comes into conflict with the principle of local fitness, which is the basis of the doctrine of free trade. Under normal conditions, there is no doubt that free trade is beneficial to a community. In addition to widening the sphere of friendly commercial intercourse, it results in larger and cheaper production and in better products. However, protection itself results in national benefits. Chief among these is its creation, in our own country, of a complete and self-sustaining economic unit. Should the United States, at any time, be cut off from the rest of the world, comparatively little difference would be felt in the amount and character of the goods consumed. By encouraging the production of goods essen-

*The
conclusion.*

tial to industrial greatness, protection has placed the United States in a position of economic independence.

QUESTIONS FOR RECITATION

1. Why do men trade?
2. Explain the difference between individual trading and community trading.
3. Why did foreign trade develop?
4. What is the primary basis of international trade?
5. Explain the part played by comparative advantages in determining international trade.
6. Explain the factors disturbing free international trade. Which is most important?
7. Name the chief items in our export and import trade.
8. Explain what is meant by the "balance of trade." What effect has this on prices?
9. Can a nation always have a favorable balance of trade? Explain your position.
10. What effect had the World War upon our balance of trade? How is the future likely to affect it?
11. Explain the meaning of world markets. How have they developed?
12. What effect have world markets upon prices? Explain clearly.
13. How are prices in world markets automatically adjusted?
14. How are goods paid for in international trading? When is gold used?
15. Explain what is meant by the rate of exchange. How may it affect exports and prices?
16. Name the chief kinds of restrictions on trade.
17. State the relative advantages and disadvantages of free trade and protection.

PROBLEMS FOR DISCUSSION

1. Is foreign trade extensive in the South Pacific cannibal islands? Why not?
2. In foreign trade, is one nation the loser and another the gainer?

3. May both nations gain from international trade?
4. What are the advantages of international trade?
5. If Canada were annexed to the United States, would the character of the trade between the two regions be changed?
6. Would a rise in prices such as took place during the World War increase imports? Explain your answer.
7. When China becomes modernized, may the United States expect to export large quantities of manufactures to that country? Of agricultural products? Why or why not?
8. How is a country like England, which has no gold mines, supplied with gold?
9. Would you expect gold to have a lower value in Alaska than in England? Why?
10. Why do we not have export duties in the United States?
11. What is the distinction between a protective tariff and a tariff for revenue only?
12. What is protection? Why did the United States adopt this policy in its early history?
13. What is free trade? Why did England adopt this policy?
14. Is the same tariff policy equally good for all nations? Why not?

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CHAPTER XXXVIII

TAXATION

I. Division of taxation

1. Federal taxation :

a. Customs duties :

(1) Kinds of duties

(2) Articles taxed

b. Excise taxes :

(1) Meaning of excises

(2) The articles usually taxed

(3) Other goods taxed

c. The income tax :

(1) The first acts

(2) Act of 1919

d. Excess profits tax

2. State and local taxation :

a. The character of each

b. The general property tax

II. Principles of taxation

1. Purpose of taxation

2. Principle of apportionment

3. Burden of taxation :

a. Indirect taxes :

(1) How their payment is shifted

(2) Who bears the burden

b. Direct taxes

c. The conclusion

Division of Taxation. — Closely connected with the subject of trade is the question of taxation. In fact, while the primary purpose of protective tariffs is the encourage-

ment of home industry by the imposition of restrictions on international trade, tariff acts serve as effective instruments of taxation and are therefore very generally employed by modern governments to produce the revenue required for their maintenance. In the United States tariff or customs duties are levied exclusively by the Federal government because Congress has sole power to regulate trade with foreign nations. Before the World War over two-fifths of the revenue of the United States was derived from customs duties. These duties are either specific or *ad valorem*, according as to whether the bulk or the value of the commodity is taxed. In the United States, the number of articles on which it is customary to levy such duties is very large. Chief among them are wool, sugar, silk, molasses, iron and steel, cotton, tobacco, flax, chemicals, glass, leather, earthenware, and jewelry. Thus it will be noticed that not only luxuries, but many necessities of life, are ordinarily subject to this kind of taxation.

But while the tariff has yielded a large revenue, the income derived from excise taxes in the United States has been equally important. Excises are taxes laid on articles consumed, sold, or manufactured within a country, and the revenue they yield is known as "internal revenue." The commodities most usually subject to this kind of taxation are tobacco and other luxuries. Because they are non-essentials, these goods are heavily taxed, and yield great revenues. However, these are not the only classes of goods subject to an excise tax. For example, oleomargarine, filled cheese, mixed flour, and adulterated butter have been included in this kind of taxation. When, too, during times of great necessity, it has

**Federal
taxation:**
*Customs
duties.*

Excise taxes.

been found necessary to increase our internal revenue, special taxes have been laid on various articles not ordinarily taxed. During the Civil War, nearly all forms of luxury were subject to taxation; during the Spanish-American War, playing cards, patent medicines, and legal documents were taxed; and, during the World War, this system of taxation was extended to automobiles and automobile accessories, to pianos and musical instruments, to tennis rackets and sporting goods, to furs, yachts, motor boats, and a host of other commodities regarded as luxuries.

However, with the adoption of the income tax amendment to the United States Constitution in 1913, and with the outbreak of the World War in 1914, there came into operation a new source of taxation *The income tax.* exceedingly rich in its possibilities for producing revenue. Twice before Congress had attempted income taxation; but the second attempt—the Act of 1894—had been declared unconstitutional by the Supreme Court of the United States. With its constitutionality assured by the amendment of 1913, Congress passed the income tax act of that year, which applied to incomes of single persons of over \$3000, and to incomes of married persons of over \$4000. This act laid a normal tax of one per cent on such incomes, and also a graduated surtax, or additional tax, of from one to six per cent on incomes in excess of \$20,000, the highest rate applying to the excess of incomes above \$500,000. Because of the reduction of revenues from customs duties due to the World War, this act was revised in 1916, and again, in 1917. The Act of 1916 increased the normal rate from one to two per cent, and the surtax rates were fixed at from one to thirteen per cent, the latter rate applying to the excess of incomes above \$2,000,000.

The Act of 1917 raised these rates still higher, placing the normal rate for individuals at four per cent, and adding to the existing surtax a war surtax ranging from one to fifty per cent. On incomes in excess of \$2,000,000, therefore, the new tax reached a total of sixty-seven per cent.

In 1919, to meet the accumulated necessities of war, this act was further revised, and the revenues under the act thereby increased. A single set of normal and surtax rates was substituted for the former double system of reckoning old and new normal and surtax rates. The limits of exemption were placed at \$1000 for single men and \$2000 for married couples. The normal rate was fixed at six per cent for the first \$4000 of taxable income, and at twelve per cent for incomes in excess of that amount. The surtax rates ranged from one to sixty-five per cent, and were made applicable to the excess of incomes above \$5000. The progressive principle was, therefore, not only retained, but applied in a still higher degree. As a consequence, the excess of income above \$1,000,000 was to be taxed the maximum rate of seventy-seven per cent. It is certain, however, that, with the adjustments in taxation following the World War, the normal tax rates will be reduced, the Act of 1919 having provided for a reduction of one-third of the rates of the normal tax for 1920.

The World War revealed the possibilities of still another source of revenue. This was found in another kind of income tax which has become popularly known as the excess profits tax. This tax was first levied in 1917, and then revised in 1919, when it was made to apply to corporations only. This tax was levied at the rate of twenty per cent on earnings exceeding eight per cent of the corporation's invested capital, and of forty per cent on

Excess profits tax.

earnings exceeding twenty per cent of its invested capital. The revenue derived from the excess profits tax and the income tax, which are combined in the first Treasury Reports, has been enormous. In 1918, their total collections amounted to nearly \$3,000,000,000; and, in 1919, to nearly \$4,000,000,000. Just what will be the future of this tax is, however, problematical. Like the income tax, the excess profits tax is almost certain to be modified after the country has passed from a war to a peace basis. However, inasmuch as the war left the United States with a debt of \$24,000,000,000, some effective means of providing necessary revenues must be devised. Since these two sources of taxation produced three-fifths of our revenue in war times, they may still be largely relied upon to yield the revenue required in the period of transition.

Coming now to the subject of state and local taxation, we find that there are likewise certain well-defined ways in which the states and local units secure their revenues. The states rely usually upon the general property tax and taxes levied upon corporations, licenses, and inheritances; while the local units also depend largely upon the general property tax, as well as poll taxes. Therefore, the general property tax, which the Federal government does not employ, is the main source of both state and local revenue. This tax is laid nominally upon all property, both real and personal, owned by taxpayers, and yields approximately seventy-five per cent of all state and local receipts.

State and
local taxes:
Character
of each.

Everywhere the general property tax is in evidence. Assessors value the property; governing bodies fix the tax rates; and local authorities collect the taxes. This general property tax, although intended for both real

estate and personal property, does not effectively reach personal property. The reason for this is obvious. Land and houses cannot be hidden from the eye of the tax collector, but personal property may be readily concealed. This phase of the tax, therefore, has the effect of discriminating against truthful and conscientious citizens.

*General
property
tax.*

Principles of Taxation. — All systems of taxation, whether national or local, should be made to conform to certain general principles. In the first place, since a tax is a compulsory payment made by an individual for the support of government, its purpose should be public. Otherwise, as in the past, if taxation were employed for private purposes, it would constitute a form of robbery and spoliation. So long as the proceeds of taxation went into the pockets of kings and nobles and were spent by them in riotous living, taxation meant robbery. To-day, however, although the national government is obliged to spend large sums of money for purposes of protection and maintenance, the state and local governments devote their incomes largely to the advancement of education, general security, and social improvements. Among the latter, better streets, cleaner water, and more playgrounds are assuming greater importance. Increased taxation may therefore mean higher social welfare.

Another important point to be considered in any system of taxation is the principle according to which taxes should be apportioned throughout the community. On this question there are two opposing theories. On the one hand, it is maintained that taxes should be levied according to special benefits received; on the other, it is held that they should be laid in propor-

*Principle
of appor-
tionment.*

tion to ability to pay. If taxes were levied according to the first principle, those receiving most benefits — the poor and needy — would be taxed most heavily. This would evidently be unjustly burdensome to this class. If, however, taxes were laid in proportion to ability to pay, those enjoying the comforts of life — the rich and well-to-do — would contribute largely to the support of government. At the same time, the mere existence of government would confer a very great benefit on these wealthy classes and justify their large contributions to public support. Therefore, we must conclude from the standpoint of social welfare, that ability to pay, not benefits received, should be the determining factor in apportioning taxes.

Directly connected with this subject of apportionment is the question of the burden of taxation. A tax may be intended for one person but paid by another.

That is, the first taxpayer may shift the payment of the tax to another, and, in this manner, make the burden of taxation fall on some one not originally intended. **Burden of taxation:**
Indirect taxes.

Taxes which may be shifted are usually spoken of as indirect taxes, while those which may not are called direct taxes. Customs duties are typical of indirect taxes. They are levied on foreign manufactures and are originally paid by the importer of the goods; but the importer, in turn, shifts their payment to the consumer in the form of higher prices. Meanwhile, if the consumer decides to buy the domestic article, he finds of course that its price has correspondingly increased. Therefore, whether he buys the domestic or imported article, the burden of this tax falls on the consumer. If he does not actually pay it to the government, he does in reality to the home manufacturer. Formerly, in the United States, since

customs duties were so generally levied in the country and since they fell so largely upon commodities in common use, like sugar and woolen goods, the burden of taxation rested chiefly upon the poor. This was further accentuated by the fact that excise taxes, which may also be shifted, were heavily laid on tobacco and liquors which, before the advent of prohibition, constituted an important item in middle class consumption.

On the other hand, direct taxes are taxes which cannot readily be shifted. The best examples of these are poll taxes, taxes on land, and on incomes. Since *Direct taxes.* these taxes must be paid directly by the individual owning the property or income, it is difficult to shift their payment upon some one else. The direct tax, therefore, reaches the person intended. Before 1913, it was practically impossible for the national government to employ this form of direct taxation so far as individual incomes were concerned. It is true that, in Civil War times, Congress had passed an income tax law, and the Supreme Court had declared it constitutional. But, in 1894, Congress passed another such law and the Supreme Court declared it violated the constitutional provision requiring direct taxes to be apportioned among the several states "according to their respective numbers." Since the direct tax could not be utilized, the burden of taxation continued to fall, at that time, upon the poorer classes.

Recently, however, this situation has been entirely changed. In 1913 an amendment to the United States Constitution disposed of the legal difficulties in *The conclusion.* the way of levying an income tax, and Congress accordingly enacted such a law. The great burden of taxation imposed on the poor by means of duties and excises

was thus offset by the direct taxation of the wealthier classes. The income tax was the most simple means of bringing about this more just apportionment. While the well-to-do classes are also subject to the general property tax of the state and local governments, the concealment of stocks and bonds and other personal property offers frequent opportunity for escaping just taxation. The income and excess profits taxes cannot, however, be equally well evaded.

QUESTIONS FOR RECITATION

1. Name four kinds of federal taxes. Define each.
2. What is the difference between *ad valorem* and specific duties?
3. Name the articles usually subject to customs duties. State the reason in each case.
4. What are excises? What goods are subject to this form of taxation?
5. During World War times how was taxation extended? Were legal transactions taxed? Give examples.
6. What were the chief sources of federal taxation before the World War? After the World War? What made the change possible? Why was it necessary?
7. Explain the provisions of the revenue tax law of 1913.
8. When and why was this act revised? What was the effect each time?
9. Explain clearly the provisions of the Revenue Act of 1919.
10. What is the excess profits tax? How much revenue did this, with the income tax, yield the United States in war times?
11. Do you think these two forms of taxation need revision?
12. What is the chief source of state and local revenues? Name some other sources.
13. Explain the chief defect in our system of state and local taxation. How would you remedy it?
14. What should be the purpose of taxation? Why?
15. How should taxes be apportioned or distributed throughout the community? Why?

16. Explain the difference between direct and indirect taxes, giving examples of each.
17. What is meant by the "burden of taxation"? How is it affected by direct and indirect taxation?

PROBLEMS FOR DISCUSSION

1. What are the reasons for changing tariff duties from time to time?
2. Explain the attitude of the different sections of the country toward the tariff.
3. What advantages does a system of customs duties offer as a means of raising revenue?
4. Would customs duties be a satisfactory source of revenue for the United States in time of war?
5. Make a list of the disadvantages of a system of customs duties.
6. Who bears the burden of a revenue tariff?
7. Who bears the burden of excise taxes?
8. Who bears the burden of an income tax?
9. Should incomes below a certain amount be exempt from taxation? Why?
10. How high a rate should you approve in taxation of inheritances?
11. What effect had the World War upon our system of taxation?
12. What are the chief characteristics of our system of state and local taxation?
13. How may taxation affect the problem of surplus wealth?
14. What do we mean by a progressive income tax?
15. What tax, or taxes, do you think will usually form the main source of our national revenue? Why?
16. Why did we not make general use of income taxes earlier in our history?
17. In the past, what was the chief defect in our system of federal taxation? How has it been remedied?

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PART FIVE

PROBLEMS OF DISTRIBUTION

CHAPTER XXXIX

A SURVEY OF DISTRIBUTION

- I. Nature of distribution
 1. Meaning of distribution
 2. The shares in distribution :
 - a. How they arise
 - b. What they are called
 3. Inequalities of income :
 - a. Causes :
 - (1) Differences in productivity
 - (2) Monopoly of land
 - (3) Monopoly of capital
 - (4) Exploitation of labor
 - b. The consequences
 - c. Some examples
- II. Groups of distribution theories
 1. The productivity theory :
 - a. Its basis
 - b. What it advocates
 2. The monopoly theory :
 - a. Its basis
 - b. What it advocates
 3. The conclusion

In our treatment of American economic life thus far, we have considered the problems arising from the consumption, production, and exchange of wealth. The chapters de-

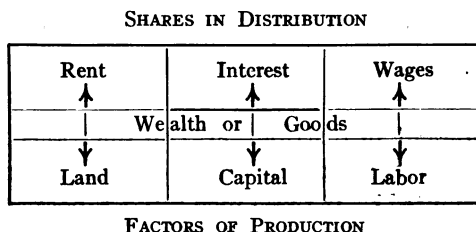
voted to a discussion of the mechanism of exchange have shown us that this phase of economics, in common with all its other parts, is intimately connected with the subject of individual and social welfare. There still remains one phase of wealth that we have yet to consider; that is, the problem of its distribution.

Nature of Distribution. — The problem of distribution deals with the principles according to which the wealth of society is distributed among the factors which have produced it. Just as the principles of exchange deal with the mechanism whereby goods are transferred from one person to another through the medium of money, credit, trade, or some similar device, so the principles of distribution are concerned with the manner in which land, labor, and capital receive the shares of the wealth created by their united action. In this sense, distribution must not be confounded with the process by which goods are transferred from place to place, or from person to person. Furthermore, the problem of distribution deals *primarily* with the shares assigned to the factors of production, and not with the incomes of individuals. But, since the institution of private property legalizes the ownership of these shares in the hands of private individuals, the question of personal income is inseparably connected with the distribution of these shares among the factors of production.

To the student of distribution, two questions naturally present themselves: How is wealth created? How is this wealth distributed? If three men build a boat, the value of this boat is divided among the factors entering into its production. If, however, instead of a boat, all the wealth of society is to be considered, it becomes necessary to in-

quire in detail what factors produced this wealth in order to know how its money value should be distributed. The factors which produce wealth are land, labor, and capital. Therefore if land, labor, and capital have produced the wealth of society, these same factors must be entitled to its use and enjoyment. This is the basis of the distribution of wealth throughout society. Each factor of production is entitled to a share in distribution by reason of the part it has played in production.

In order clearly to distinguish these shares from one another, the science of economics differentiates them by distinct phraseology. That is, it applies a separate term to the share of wealth received by each of the factors of production. The terms employed must not be confounded with the popular meaning sometimes attributed to them. The name of land's share is rent; of capital's share, interest; of labor's share, wages. As we have said, the basis for the existence of these shares lies in the productive power of the agents creating them. These factors of production and shares in distribution may be represented in a simple manner by the following diagram :



In our further discussion of this problem it will be shown that certain modern conditions interfere to prevent the shares

in distribution from corresponding exactly to the respective parts played by the factors of production; that other elements enter not only into production but also into distribution; and that these shares themselves, as the diagram might seem to indicate, are by no means equal in amount.

We have said that, because of the institution of private property, the question of the shares of wealth created by the factors of production is inseparably inter-

**Inequalities
of income:**
The causes.

woven with the problem of individual incomes. For example, rent, although created by land, is appropriated by the landlord; interest, although produced by capital, is enjoyed by the capitalist; while wages, the rewards of labor, are naturally appropriated by laborers. Therefore, if rent and interest increase rapidly and wages do not, the income of landlords and capitalists will rise, while that of laborers may remain stationary. These inequalities of wealth and income constitute a very real factor in the life of every modern community. Fifth Avenue stands out in sharp contrast to the lower East Side. Compared to the adversity of the many, the prosperity of the few is exceptional. Here, for example, is one family with an income of a thousand dollars a month, and there another, struggling to maintain itself on a thousand dollars a year. What, then, are the causes of this great inequality of income? Many explanations and suggestions have been offered to account for this difference of social income, but there is little harmony of opinion among writers as to its ultimate cause. However, in America, four factors seem to stand out as prominent and striking causes of such inequality: (1) differences in productive capacity, (2) monopoly of land, (3) monopoly of capital, and (4) exploitation of labor.

One of the most important causes of difference of income, that is, of difference in the distribution of the product of industry, is found in varying productive capacity. In the last analysis, the amount of wealth that can be distributed throughout a community depends upon the amount of wealth that can be produced. The amount of wealth produced will depend largely upon the abundance and fertility of natural resources and upon the efficiency of labor. When natural resources are plentiful and properly utilized, it is evident that the sum total of the product to be divided will be greatly increased. Similarly, when labor is intelligent and adequate, the amount of wealth produced will be favorably affected. In the former case, however, land's share would naturally increase, while in the latter case, labor would correspondingly benefit. But, whenever labor is unproductive or inefficient, its relative share in wealth distribution will suffer. Many inequalities in income, therefore, are due to shiftlessness, idleness, or inefficiency in labor. Such differences are perfectly clear and explainable. On this basis, if one man's income is one thousand dollars a year, and another's ten thousand dollars a year, the difference is due to the fact that the first laborer has but one-tenth the productive capacity of the second. Labor is thus held responsible for its own condition.

Opposed to this explanation of inequalities of income, we have the view of those who primarily attribute such inequalities to the factors of monopoly and exploitation. The effect of the monopoly of natural resources upon wealth distribution may be readily discerned. No one can fail to see the social importance of this monopoly control. Since prosperity is directly dependent on natural resources,

every effort should be made to extend the use of natural resources to all members of the community. If, however, these resources should be monopolized, or withheld from use by a few individuals, the great mass of people would either be deprived of natural advantages, or forced to pay exorbitant prices for the enjoyment of their products. Through the monopoly of land, prices may be so controlled as to deprive the consumer of a large part of his income. Thus, very real inequalities of income may result.

Monopoly price, arising from the monopoly of natural resources, is thus one means of shifting income from one class to another. But the determination of monopoly price does not depend entirely upon the monopoly of natural resources. Monopoly of capital is also a factor in determining monopoly price and in bringing about huge monopoly incomes. The concentration of great masses of capital in the hands of a few individuals gives them a tremendous advantage in fixing prices, and in diverting incomes from others to themselves. Likewise, special privileges, secured through patents and copyrights, play an important part in creating inequalities of income.

Because of this monopoly power, some writers maintain that the wealth of one group in society often increases at the expense of another. They take the view that, if certain men receive more than they produce, others receive less than they produce. Setting aside, for the moment, the monopoly power that comes from exceptional capacity or unusual training, it is maintained by this school of writers that the monopolist, deriving his power through an exceptional control over land or capital, is reaping where he has not sown, that is, securing value which he has not produced. If, therefore, labor has produced this value and is deprived

of it, the monopolist is charged with exploiting labor for his own benefit. In this manner, monopoly of land, monopoly of capital, and exploitation of labor constitute, in the opinion of these writers, a series of causes which explain many of the inequalities in income.

Despite any difference of opinion regarding the causes of these inequalities of income, there can, however, be no doubt of their existence and consequences. We have seen that a standard of living is determined largely by wages, and we now see that wages is a part of the problem of distribution. Therefore, inequalities of income have a direct effect upon standards of living. While, to-day, comparatively few individuals have such great incomes as to permit the development of the highest possible economic standards, large numbers of people are existing on a standard of living which does not satisfy the requirements of modern life. As a consequence, the children of these families are likely to grow up to be inefficient industrial workers.

While the fruits of modern economic progress have not been wholly confined to a small class, it is nevertheless true that there is a surprising amount of poverty existing in America. On this point, the report of the United States Commission on Industrial Relations, issued in 1915, said, "It is certain that at least one-third, and possibly one-half, of the families of wage-earners employed in manufacturing and mining earn in the course of the year less than enough to support them in anything like a comfortable and decent condition." On the other hand, the income tax returns for the calendar year 1917 showed that 3,472,890 persons reported net personal incomes in excess of \$1000. At the same time the returns

showed 1015 incomes in excess of \$300,000, and 141 incomes of \$1,000,000 or over per year. The fact of inequalities in income is therefore conclusively established.

Groups of Distribution Theories.—Unfortunately, economists do not agree on one single theory of distribution. In fact, opinion has been so divided that many conflicting theories have been advanced from time to time. In general, however, theories of distribution may at present be divided into two main groups, (1) those emphasizing productivity, and (2) those stressing monopoly as a determining factor in the problem. While both these schools of writers believe in social justice, they vary in their explanations of the causes of inequalities of income. The productivity school bases its theory on competition and productive capacity. Its followers hold that certain natural laws tend to produce given results. One of these natural laws, competition, will result in a just system of distribution provided it be left free to work itself out. In the absence of competition, distributive justice is obviously impossible; but, were competition widespread, a just system of distribution founded on productive capacity would be inevitable.

The productivity theory:
Its basis.

Proceeding on this basis, the productivity theorists apply their system to modern society through the program of government regulation. They admit the presence of monopoly but direct all their efforts towards its abolition, because they believe that only through competition will justice be realized. That is, they advocate government regulation of industry. This theory holds that the shares in distribution are determined exactly by the productivity of the factors. That is, if a tin dipper costs ten cents, and if natural resources contributed two

What it advocates.

cents to its production, under a strictly competitive régime, natural resources would be paid two cents in rent. In the same way, if labor contributed four cents, labor would receive four cents as wages. Thus, if competition can be made free, society will naturally right itself by the action of this universal law.

The monopoly theory of distribution, in distinct contrast to this productivity theory, looks upon monopoly as the factor of prime importance and as the logical outcome of present social development. Social evolution, it is asserted, has reached a stage in which monopoly is inevitable. This school, therefore, takes the position that no person is to blame for modern industrial monopoly. Monopoly is not "wrong." It is merely a product of modern industrial conditions. In other words, monopoly is an economic law of modern society. Therefore, in solving the distribution problem, monopoly, not productivity, is looked upon as of primary importance. According to the theories advanced by this group, if natural resources contribute but two cents to the actual production of the dipper, nevertheless, because of the monopoly which the owner of the natural resources possesses, the amount which goes to him may be three cents, — two cents representing the contribution of natural resources and one cent representing monopoly power.

If the monopoly theory be true, the method of securing a more equal distribution of wealth lies in the increase of monopoly power rather than in its abolition. This school, therefore, advocates increasing especially labor's monopoly power. Does the laborer feel that he is being unfairly treated by not securing the full

**The
monopoly
theory:**
Its basis.

*What it
advocates.*

value of his work? Or, does he think he is being exploited by his employer? If so, he has but one remedy. That is, he must secure through organization, education, or legislation some special monopoly power which will enable him to make headway against the monopoly power enjoyed by his employer.

In contrasting these two theories, it may be said that the productivity theory of distribution is really a picture of what might be under ideal conditions of competition, while the monopoly theory is an attempt ^{The} ^{conclusion.} to analyze things as they really are. For this reason the monopoly theory is regarded by some as furnishing a more adequate basis than the productivity theory for a discussion of modern problems of distribution. While, therefore, in the following chapters, the productivity theory of distribution will always be emphasized, mention will be made of the monopoly principle whenever it appears to be one of the determining factors in distribution. However, in our study of distribution problems it is well to remember that frequently both of these principles are simultaneously at work.

QUESTIONS FOR RECITATION

1. Explain clearly the meaning of "distribution." Show how it differs from exchange; from transportation.
2. What names are given to the shares in distribution? Define each. Show their relation to the factors of production.
3. Are inequalities in shares the same as inequalities in incomes? How do they differ? How are they related? What is the reason for this relation?
4. Why do we have the landlord and the capitalist? What effect has each upon the problem of wealth distribution?
5. Name the primary cause of inequalities in income; the secondary causes.

6. Show how each of the above causes produces inequalities of income.

7. What inequalities are justifiable? Which are not? Why?

8. Do you believe that most of the inequalities of income, to-day, are based on just or unjust causes? Why?

9. Explain the consequences of inequalities of income. Give examples of such inequalities.

10. Do you believe, to-day, that the rich are richer and the poor are poorer than they were a hundred years ago? State your reasons.

11. What is meant by the productivity theory of distribution? Upon what does this theory depend?

12. What do the supporters of the productivity theory advocate? Why?

13. Explain the position of the supporters of the monopoly theory of distribution. What do they advocate?

14. Show the conditions to which these two theories are applicable.

15. How may these theories be blended in a discussion of the problems of distribution? Give some examples.

PROBLEMS FOR DISCUSSION

1. In economics should the emphasis be laid, to-day, rather on the subject of distribution or on that of production? Why?

2. If a man produces one commodity, how does he satisfy his wants? Upon what will his ability to satisfy his wants depend?

3. What idea lies back of the expression "distribution of wealth"?

4. What are the different methods by which people obtain their incomes?

5. How can a chair be said to be distributed among the land, labor, and capital creating it?

6. What is the relation of private property to distribution? How is this illustrated in the case of land? In the case of capital?

7. Was there any distributive problem when each household was economically self-sufficient? Why not?

8. When we speak of the economic inequalities of to-day, do we mean inequalities of property or of income?

9. Is there any relation between political democracy and in-

dustrial democracy? What bearing has this problem upon distribution?

10. If a man coöperates with others in making a commodity, what determines the extent of the share he can secure?

11. Should a man be paid according to his ability or according to his needs? Why?

12. What is the relation between distribution and production?

13. Explain how our present system of wealth distribution might be changed (*a*) by law, (*b*) by revolution. Is either desirable?

14. Give some examples from history of such changes.

15. How is the problem of distribution bound up with the problem of welfare?

16. What share in the distribution of wealth is not mentioned in this chapter? Why?

17. Explain the relation between abundant natural resources and national prosperity. How would this affect the distribution of wealth?

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CHAPTER XL

THE THEORY OF RENT

I. Nature of rent

1. What rent means
2. How rent is paid
3. How rent arises :
 - a. From differences of fertility
 - b. From differences of location
4. The conclusion

II. Grades of land

1. The usual grades
2. The " no-rent " land
3. How rent varies :
 - a. Between grades
 - b. Within a grade :
 - (1) Marginal rent
 - (2) Differential rent
 - (3) An illustration
 - c. The general principle
 - d. Explanation of diagram
 - e. Other applications of the law
4. The danger

Nature of Rent. — The most generally accepted and most firmly established theory of distribution is that relating to rent. Rent is the return on natural resources, and, in economics, means the amount of wealth that " land " receives for its part in production. Therefore, from an economic standpoint, " rent " means something quite different from the sense in which

What
"rent"
means.

the word is used by the real estate broker. The latter uses the term to represent not only the return on land — the lot — but also the return on capital — the house. Real estate rent includes both rent and interest; economic rent signifies simply the return on land. This distinction is fundamental and must always be borne in mind.

It is equally important to remember that rent exists regardless of the manner in which it is paid, or of the person to whom it is paid. For example, land may receive its share of rent in the form of so many extra bushels of wheat, as well as in the form of money representing these bushels of wheat. Similarly, this rent is paid to land regardless of whether the land is used by the owner, or by the tenant. Since land cannot take this rent itself, some one takes it for the land. The landlord receives the rent. If he uses the land himself, he receives it in the form of extra crops; if some one else uses it, he takes it in the form of money. When the owner and the user are two different persons, it may easily be seen that the payment of rent becomes more marked and socially significant. This fact is well brought out in the history of Ireland where, for centuries, rents have been exacted from the peasants by their English landlords.

Since rent exists so generally, it is important to understand clearly how it arises. Rent arises because of differences in the productive capacity of various lands.

This difference in productivity may be due to a difference in the fertility of the soil, or to a difference in the location of the land. First of all, picture in your mind two separate tracts of land, each an acre in size. Every spring the two farmers owning these tracts go out to plant their grain. They

How rent
arises:

From differences of
fertility.

may use the same quality of fertilizer, the same kind of grain, the same type of plow, and they may have the same efficiency in their labor force. In the fall, one farmer reaps twenty bushels; the other fifteen. To what may we attribute this difference in yield of five bushels per acre? In all production there are three factors,—land, labor, and capital. On these two acres the capital and labor are, by assumption, respectively identical. This being the case, there remains but the third factor to which we may attribute this extra growth of five bushels. That is land. The extra return of five bushels is the income which we attribute to the better acre because of its superiority over the poorer one. Such an increase is termed “rent.” Thus, rent arises because “land” aids man unequally in production. In one place it yields fifteen bushels, in another twenty. This difference in the yield constitutes the rent.

Again, let us picture to ourselves two retail stores of equal attractiveness so far as the buildings and goods are concerned, and each equally efficient in labor and management. One is located on the outskirts or edge of the business district; the other is near the center of one of the busiest thoroughfares. At the end of the year, the net return of the one store may be one thousand dollars, while the net return of the other may be two thousand five hundred dollars. To what, then, may we attribute this difference in earning power amounting to fifteen hundred dollars per annum? The labor is equally efficient; the physical equipment of the stores is similar. The difference, then, may only be attributed to the third factor in production, namely, land. The income which we must attribute to this second store,

From differences of location.

because of its superiority in location over the poorer, we therefore call economic rent.

Thus it may be clearly seen that the basis of rent is found in some form of land productivity. Without productivity, land would not be a factor in creating wealth, ^{The} and rent would not exist as one of the shares ^{conclusion.} in distribution. In the first illustration, the extra productivity resulted from superior fertility, which gave rise to rent; while, in the second illustration, the additional productivity was the result of superior location, which again produced rent. Of course, superiority in productivity may be the result of a combination of both fertility and location, as is the case with trucking lands near great cities. Since rent arises from differences in the productivity of land, we arrive at the conclusion that the rent of any given piece of land will be the difference between its yield or productivity and that of the least valuable land taken as a basis of comparison.

Grades of Land. — The fact that lands vary in their productiveness is seen in city as well as in country districts. In the center of every great city, for example, ^{The usual} is the most valuable land, usually devoted to ^{grades.} business purposes. Outside this business district we find, roughly speaking, the circular belt of the residential district, which, though it has not quite the high social value of the business section, still plays an important part in the use that man makes of land. Then, beyond the confines of the city, is the land devoted to truck farming; still farther out lie lands devoted to general farming, and to grazing.

There may still be land lying beyond the grazing land, which is least desirable for any of the uses to which man

may put land, but which serves to catch the overflow of population, and is used by the less fortunate members "No-rent" of society who are willing to go on this poor out-land. lying land and work there for a bare living. This last type of land has earned the name in economics of "no-rent" land, — a term which implies that a man working on such land will merely get enough from his labor to allow himself his daily wage and a sum sufficient to pay for the use of the simple tools and seed that he may need in cultivating it. Its fertility is so low that when a definite return from the land is set aside to pay the wages of labor and the interest on capital, there is nothing left for rent. Hence the expression "no-rent" land.

Broadly speaking, that class of land which has the highest social value will yield the largest amount of rent, and, in each class, that land which is superior will yield the higher rent. Accordingly, all land used for business purposes yields a greater income than land used for residential purposes. This latter, in turn, yields more than land used for trucking, while trucking land yields more than land used for farming. Again, farming land is more valuable than land used for grazing, which, in its turn, brings in a higher return than "no-rent" land.

It is apparent, however, that, though this general scheme of gradation of the size of rents holds good, there are many variations in rent, and that no two pieces of land within a grade. in the same belt pay exactly the same amount of economic rent. Hence, we speak of the poorest land of each rent-paying belt — the marginal land — as receiving a marginal rent. If we take this poorest land as our basis, better land in the same class must pay a higher rent due to its su-

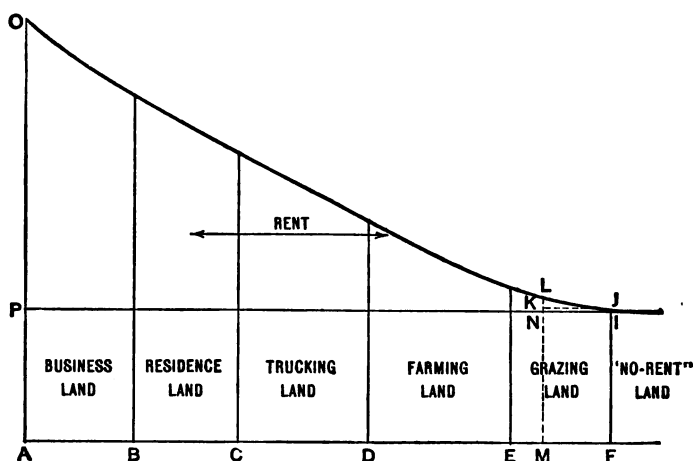
periority. This additional rent is called the differential rent, so that in theory all land which is better, to however small a degree, than the poorest land in the belt pays a rent composed of these two elements, — a sum equal to the amount paid for the poorest land of its class, called marginal rent, and an additional sum proportionate to its superiority over that land, called differential rent. The two together equal the economic rent.

To illustrate, one can imagine a piece of land just on the margin of the trucking belt adjacent to the general farming land. It is the poorest land used for truck farming and yields a rent of twenty-five dollars an acre. Half a mile nearer the city there may be a second farm which, because of its superiority, will have to pay an additional sum of ten dollars, making its full rent the sum of the marginal and differential rent, or thirty-five dollars. Still farther in toward the city we can conceive of the very best land used for this purpose lying adjacent to the suburban district. This farm, being near to the city markets, will have to pay an even greater differential rent, perhaps fifteen dollars, making in all a total economic rent of forty dollars.

If, now, we go even farther toward the city, we immediately pass into the next belt in our illustration, the residential. The poorest land used for this purpose *The general* gives us the new marginal rent for that belt. *principle.* It is obvious, however, that the entire rent paid for the poorest or marginal land in this belt must be a little higher than that paid for the best land of the next lower or trucking belt. If this were not so, the land in question would be put to truck farming again, because it would yield by that method a larger return. As a result, we have this general principle running throughout all rents, — the rent

of the marginal land of the next higher belt is always a little greater than the rent of the marginal land of the next lower belt plus its greatest differential rent.

This entire theory of rent is usually illustrated by the following diagram:



The horizontal line represents the different grades of land, while the vertical lines show their varying productivity. From this diagram we are enabled to see, not only the varying values of the different classes of lands, but also the varying values of different lands within the same class. For example, at one end of the horizontal base we have land A, the most productive land, in the most valuable grade, with a productivity represented by AO, of which PO is rent. At the other end we have land F, the least productive land in the lowest rent-paying belt, with a productivity represented by FJ, of which IJ is rent. This land F is the marginal land of the lowest rent-paying class and its rent (IJ) is marginal rent. A little

farther up in this grazing land, we find that land M has a productivity of ML and that, consequently, it has a differential rent of KL above the marginal rent NK. Altogether this land M has an economic rent of NL, which represents the sum of both the marginal and differential rent.

So far we have applied the law of rent to only one kind of "land," namely, the fields. It is, however, applicable to other forms of land, such as mines, forests, and water power. For example, the marginal water power would be the poorest rent-paying water power that could be commercially used for a certain purpose, as the running of a sawmill. A larger and stronger stream, capable of being used for the same purpose, would yield a greater return of sawed lumber. This additional income secured in this manner would represent the differential rent. Were there a source of water power just yielding a return large enough to pay for the machinery used in harnessing it and the labor needed in operating it, it would correspond to "no-rent" land, and might well be called "no-rent" water power. In a similar manner, this same fundamental principle of economic rent may be applied to mines, forests, and other gifts of nature.

According to these principles, land takes one great portion of the wealth of society in the form of rent. In any advanced civilization the share of wealth distribution that goes to land in the form of rent is always rising. In young and newly settled countries, where natural resources are abundant and unappropriated, the amount of wealth that goes to land is correspondingly small. However, as population increases and resources are utilized, the landlord class, under the system of private property, naturally appropriates a larger and larger share

*Other
applications
of the law.*

The danger.

of wealth. This higher rent may result from the normal increase in land's productivity which is brought about by extending the margin of cultivation. However, it is possible for the landlord class to divert to themselves, through their monopoly power, a still larger portion of the wealth of society. In the United States there is little doubt that, in the past, this monopoly power has been so exercised, and that the landlord has sometimes taken not only what the land has earned through its extra productivity, but that he has, in addition, through his control of prices, taken, as so-called rent, more than the land has earned. Should this monopoly of natural resources continue unchecked, the land-owning class would appropriate a great mass of wealth which the land itself did not actually produce.

QUESTIONS FOR RECITATION

1. Define rent. Give illustrations of its correct and incorrect use.
2. Show how economics puts "new wine into old bottles."
3. Name the two forms that rent may take. Give an example of each.
4. How is the land user, when he is not the land owner, affected by the payment of rent? Contrast Ireland and France in this respect.
5. Is the "tenant-system" of land tenure in operation in England? In the United States? What difference does this make?
6. Give illustrations of how rent arises from differences in productivity based (1) on fertility, (2) on location.
7. What will the rent of any given piece of land depend upon?
8. Describe, in order of importance, the five grades of rent-paying land.
9. Explain the meaning of "no-rent" land. Is this land capable of any productivity? What becomes of its return? Are there any such lands in the United States?

10. Show how the productivity of rent-paying lands varies. What becomes of the extra productivity in each case?

11. Show how rent varies in a given belt of land. Illustrate from the returns on truck farms.

12. Define (1) marginal rent; (2) differential rent; (3) economic rent.

13. Explain the general principle running throughout all rents.

14. Why are the central residential districts of great cities being invaded by business houses?

15. Explain fully the entire theory of rent by means of a diagram.

16. Apply the theory of rent to mines or water power.

17. Why do rents increase with advancing civilization? What effect has this increase upon social income?

18. Is productivity or monopoly power the determinant of rent? Why?

19. How may monopoly power affect the payment exacted for the use of land? How may society overcome this danger?

PROBLEMS FOR DISCUSSION

1. With whose name is the theory of rent most closely associated? Discuss his life and work.

2. What is the relation between the law of diminishing returns and the theory of rent?

3. Do the governments of other countries own land? Would it have been better for the United States to have retained the ownership of its land than to have given it away? Why do you think so?

4. Why is rent called an "unearned increment"?

5. How does rent arise? Would rent disappear if land were unlimited in amount and of equal value? Defend your position.

6. What is meant by "free land"? Is there any such land in the United States? If so, why don't we all make use of it?

7. What would be the effect upon rent if new land were discovered? If a railroad opened up a new country?

8. Is the "rent" of a down-town New York office rent in the economic sense of the term? Why not?

9. Are tenants very likely to make permanent improvements upon rented land? Why do you think so?

10. What is the difference between economic rent and commercial or contract rent?

11. Can you give examples of a rise of commercial rent? Of a decrease? State the causes in each case.

12. Is the income yielded by permanent improvements on land rent or interest? Why?

13. How has the advent of trolley cars and automobiles affected rent?

14. Do high rents cause high agricultural prices or do high agricultural prices cause high rents? Explain your answer.

15. What case of unearned increment in land values can you cite?

16. State the advantages and disadvantages of private ownership in land.

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CHAPTER XLI

THE THEORY OF WAGES

- I. Nature of wages
 1. Meaning of wages :
 - a. Money wages
 - b. Real wages
 2. Necessity of money wages
 3. What wages include
- II. Groups of laborers
 1. Four main classes :
 - a. The leaders
 - b. The salaried and professional men
 - c. The skilled laborers
 - d. The unskilled workers
 2. Why non-competing
- III. What determines group wages
 1. Supply and demand
 2. Productive power :
 - a. Meaning of productivity
 - b. Importance of this principle
 - c. Marginal productivity
 3. Monopoly power :
 - a. Its meaning and use
 - b. How wages vary with it
 4. Why group wages are stable :
 - a. The progressive advance
 - b. Children move up
 5. The conclusion

Nature of Wages. — In the distribution of wealth, the term wages is used to represent the share of the social

income that labor receives for its part in production. Wages are therefore the return on labor, just as rent is the return on natural resources. Since land and labor were the two original factors of production, rent and wages were the original claimants in the distribution of the early social income. We have seen that the development of the capitalistic régime introduced another element in production, and, therefore, another share in the distribution of the total product called interest. Our concern now, however, is with wages, — labor's share of the wealth of society. This share that labor receives is popularly estimated, like the other shares, in terms of money. The value of labor's products, just as the value of all other products, is measured through the medium of money; and, when the laborer speaks of wages, he therefore thinks of the money wages he receives. Money is the accepted form in which wages are paid, because money is the universal measure of all economic values.

It must be remembered, however, that money itself is only the measure of value. That is, back of money there must be some actually created economic goods. These goods constitute labor's real wages. The term "money wages" is but a symbol and merely stands for the goods for which the money may be exchanged. In modern society, the laborer could not usually live upon the goods he helps to produce, and he is, therefore, very glad to receive money wages. But his real wages are represented by the purchasing power of his money wage. Indeed, if there were no money, there would still be wages, because labor would still produce and be entitled to a reward for its part in production. In this

case, wages would be received in the form of actual products.

Why is not labor, to-day, paid in the form of actual products? Everywhere we find labor not receiving the goods it actually produces, but being paid wages in the form of money. Why has it become necessary for society to adopt this uniform wage system for the payment of labor? The productive processes of modern society are highly complicated. There is no longer a simple, direct relation between labor and the materials of production, and, consequently, the laborer no longer receives the actual goods he creates. A great intermediary class, known as employers, has grown up in industrial society. This class owns the tools of production, offers the laborer employment, receives the product, and, in exchange, gives him, through a uniform wage system, a certain sum of money called wages. The payment of money wages, however, should not obscure the real relation between labor and the product it creates.

Another important consideration to bear in mind in a discussion of the nature of wages is the inclusive character of the term. Not merely physical laborers receive wages. Since wages are the reward of labor, and since labor is industrial effort, the term wages applies to the rewards of industrial activity, whether mental or physical. It is, therefore, a great mistake to confine the term wages, in our thinking, merely to the return on physical labor. Wages is just as broad as labor, and we shall find that there are several well-defined groups of labor, each one of which receives some form of wages. In these upper groups it is sometimes customary to speak of the return as salary, fee, or compensation. However,

**Necessity
of money
wages.**

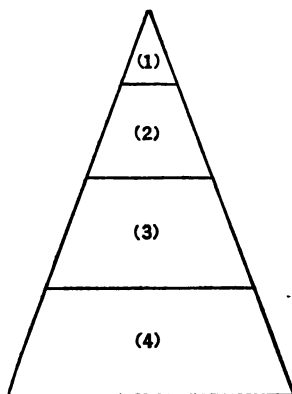
**What
wages
include.**

the term wages includes these returns, so that the salaried architect or the public official, as well as the office boy or the fireman, is the recipient of wages. In fact, in the United States perhaps nine-tenths of those gainfully employed receive wages, so that our working population may well be described as a wage-earning group.

Groups of Laborers. — Since wages include the incomes of so many different laborers, it is necessary to classify laborers according to wages received. In the **Four main classes.** first class are the leaders — the men and women of greatest productive capacity. This group includes the brain workers of largest wage-earning power, such as high salaried executives, authors, and inventors. Next to these comes the large body of successful salaried and professional men who stand out prominently in every community. The recognized physician, lawyer, or educator as well as the salaried engineer or expert accountant may be included in this group. The next class of laborers is made up of the great mass of skilled workers who have received some form of special training. Not only carpenters and mechanics, but skilled draughtsmen and typists are members of this class. Finally, there is the horde of unskilled workers that range all the way from the peddler to the immigrant street cleaner. These last two classes merge imperceptibly into each other, and the laborers forming the connecting link are often spoken of as semiskilled workers.

The division of labor into these groups may be observed in almost every community. Professor Giddings has brought out the basic differences in these groups **Why non-competing.** by characterizing them as (1) the responsible mental, (2) the automatic mental, (3) the responsible

manual, and (4) the automatic manual. Each group is thus well marked off from every other by reason of the special quality essential to the success of each class. Hence these groups are practically non-competing. In fact it is often customary, in certain communities, for the *personnel* of each group to be made up of the same families generation after generation. This, of course, is more true of the fixed, static societies of the Old World than of American civilization. We shall see presently that certain forces are at work in new countries to break down these rigid class distinctions. But even here it is generally true that these groups are so well marked off that, at any given time, little competition prevails among them. It is therefore our task to discover now what determines wages in each of these well-defined groups which may be represented by the accompanying diagram.



What Determines Group Wages. — At the outset it will be noticed that these groups of laborers increase in size as they go downward from the top to the bottom of the pyramid. At the same time it must be evident that, from the standpoint of production, their capacity decreases in the same direction. This means that the supply of labor increases in each lower group, while the demand for labor increases with the upward movement through the groups. Hence the law of supply and demand applies to labor, as it does to economic commodities. Since wages depend upon the relation between the supply

of labor and the demand for it, the wages of group (1), the leaders, will be inversely as great as their number is small, while the wages of group (4), the unskilled workers, will be inversely as small as their number is great. This principle likewise applies to the other groups of laborers. We come now, however, to the vital question in the explanation of wages. Why should the supply of certain kinds of labor be small, and why should the demand for them be great? The answer to this question will give us the fundamental reason why wages vary. This is found in the principle of productivity.

It is evident that men of high productive capacity can command high wages. This kind of labor is in demand because its productive power is great and its supply is limited. The principle of productivity, therefore, plays the dominant part in determining the wages that such a group of men receives. By productivity is meant the creative power which individuals possess in varying degrees and whereby they are able, either directly or indirectly, to produce material wealth. On all sides there are evidences of this kind of capacity in workers of the first order.

Throughout the whole theory of wages, this principle of productivity must be constantly kept in mind. In fact, it forms the foundation of the general theory of distribution. Not only labor, but also capital, depends upon productive power as a basis upon which each may claim a share in the distribution of wealth. As Professor H. R. Seager points out, "the law which determines the division of the product between labor and capital in competitive industries for a society in a state of normal equilibrium is that each receives the share that

**Productive
power:**

*Meaning of
productivity.*

*Importance
of this
principle.*

it produces." If labor did not produce anything, it would not be entitled to anything. Labor is entitled to wages because it has played a vital part in producing wealth. Under free competition, wages will, therefore, depend upon labor's productivity, which decreases as the groups increase in size.

In our discussion of wages it should be remembered that labor's share of the product of industry is fixed theoretically at the margin of production, or by marginal producers. Wages, like interest, is therefore determined independently of rent. The share of the total product that labor receives, as wages, will consequently vary with land's marginal productivity. Where this is comparatively high, as in fertile, undeveloped lands, labor, like capital, will be correspondingly benefited. For this reason, wages in the United States have been relatively high, because the marginal productivity of its land has been great as compared with that of many other countries. In other words, the richness of America's natural resources on the frontier has been a potent cause of the high wages paid to labor in this country. As the richer land is used up or appropriated, labor's share of the social income naturally declines, unless its supply diminishes or the demand for labor increases.

To-day, however, in the absence of a purely competitive régime, does labor receive exactly what it produces? Does the principle of productivity, and this principle alone, determine under present conditions the wages of labor? For example, it is obviously true that men of great productive power command large wages, yet it seems equally obvious that men sometimes receive more or less wages than is represented

*Marginal
productivity.*

**Monopoly
power:**

*Its meaning
and use.*

by the value of their product. The wages of any class of labor seems to depend, not only upon its productive power, but also upon its monopoly power. The more monopoly power a group has the higher will be its wages. Monopoly power has already been defined as some unusual power that enables the holder to fix a price other than the competitive one. It is frequently exercised by the monopolist when he controls prices without regard to the laws of competition. This unusual power may also be exercised in behalf of labor, either individually or collectively. Either by acquiring some special ability, or by securing power through organization, labor may regulate its price and command wages without any absolute regard to the actual value of its product. In both cases, through an unusual control over labor resources, monopoly power, in addition to productive power, determines the wages paid to labor.

This dependence of wages on labor's monopoly power is seen when we examine the monopoly power of each class of laborers. Society has had frequent evidence of the great monopoly power of the leaders, and of its effect upon their income. At the other extreme, we have the class of unskilled labor

*How wages
vary with
monopoly
power.*

with minimum wages and little monopoly power, that is, no unusual power to control the price of its labor. Because of this absence of monopoly power, the cost of subsistence is practically the determinant of wages for this group of laborers. Above them, the skilled laborers are much better off, because their monopoly power is increased by group organization. The group of salaried and professional men secure monopoly power largely through individual reputation and initiative. Thus it may be seen that, in all these cases, group wages vary not only with

productive power, but also with monopoly power. This principle determining group wages applies likewise to individual wages.

In a discussion of group wages there is another question that naturally arises. Why are group wages more or less stable? For example, why does the wage of the unskilled laborer remain approximately at the same level over long periods of time? The answer to this question is clear. The progressive members of one group advance to the next higher, thus relieving an undue pressure of numbers in the group below. For example, the great influx of immigrants, who have joined the ranks of unskilled labor in this country, has forced the American unskilled worker to seek some special training fitting him for more skilled labor. His standard of living will not submit to the low wages that foreign labor accepts. Thus the progressive, who move up, make way for the newer ones who come in.

Why group wages are stable: Progressive advance.

At the same time, the children of skilled and unskilled laborers, who are dissatisfied with the economic position of their parents, frequently move up to the class of commercial and professional men. This general advance, therefore, from one group to another, brought about by the movement of the more progressive and younger elements, results in a general mobility of labor whereby overcrowding in one group is minimized and the wages of the various groups remain more or less stationary.

Children move up.

From this presentation of the theory of wages, it will be observed that two factors — productivity and monopoly power — are of prime importance in determining the wages of a given group, or of a particular individual. If it were not for productivity, there would be

The conclusion.

no wages, and if it were not for monopoly power, wages would not be what they actually are. Under ideal conditions of pure competition, the productivity principle would be sufficient to explain wages in any given case. Each individual would receive as wages that which, in competition with others, he produced. But when competition is checked, as to-day it actually is, the amount of wages that a group or individual can command depends almost as much upon his monopoly power, that is, his unusual power to control the price of labor, as upon his productive power, that is, the wealth he actually produces.

QUESTIONS FOR RECITATION

1. Define wages. Do you expect to receive wages? How could you live without wages?
2. Explain the difference between money wages and real wages.
3. Show the effect of prices on wages.
4. Why is it necessary to have a uniform system of wage payment?
5. How broad is the term wages? Why and how is its meaning sometimes restricted?
6. Describe the four groups of laborers. Illustrate by diagram.
7. Why do not the main groups of labor compete with one another? What effect has this situation upon the general question of wages?
8. How does the principle of supply and demand affect wages? Give examples.
9. What is meant by productivity? What is the relation of this principle to group wages?
10. What is the "margin of production"? How does this affect wages?
11. What effect has competition, within a group, upon wages? Do we have such competition nowadays? Explain and give examples.
12. What do we mean by "monopoly power" as applied to labor? How does it affect the wages of each group?

13. Why do the wages of skilled labor often remain at about the same level for long periods of time?

14. How does the monopoly power of the physician differ from that of the carpenter? How does the monopoly power of each affect his wages?

15. How does the professional ball-player exercise his monopoly power? How does this affect his wages?

16. Explain the relative importance of the principles of productivity and monopoly power in the determination of wages (1) when competition is free, and (2) when competition is not free.

PROBLEMS FOR DISCUSSION

1. Discuss the "wage fund" theory. How is it regarded to-day?

2. What is meant by the "Iron Law of Wages"?

3. Who was Malthus? What did he teach?

4. What interest have the rich in an abundance of labor?

5. What is meant by the "sweating system"? Give examples.

6. What is the effect of public education on labor's productivity? On wages?

7. Speaking generally, does the laborer gain or lose by working under conditions of abundance of land and capital? Why?

8. If a factory town is destroyed by fire, will wages throughout the country be affected? State your reasons.

9. Make a list of the factors affecting the demand for street cleaners in Chicago; a physician in a small town; a barber.

10. Would you have to pay a cook in an Alaskan gold-mining camp high or low wages? Why?

11. In your own individual case, what do you think will determine your wages in after life?

12. If we had no money, would we still have wages? Why?

13. In the nineteenth century, why were wages as a rule higher in the United States than in Europe?

14. Why did wages rise in America during and immediately after the World War? Can wages rise indefinitely? State your reasons.

15. Why are Chinese excluded from the United States? What

group of laborers would be most affected by their re-entry into American life? Why?

16. Do the following receive wages? Why?

- | | |
|--------------------|-------------------------------|
| (1) A clergyman. | (4) A gambler. |
| (2) An editor. | (5) An unsuccessful inventor. |
| (3) A ball-player. | (6) A public official. |

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CHAPTER XLII

THE THEORY OF INTEREST

- I. Nature of interest
 - 1. Its meaning :
 - a. Definition
 - b. Examples
 - 2. Kinds of loans
 - 3. Capital and money
 - 4. Why interest is necessary :
 - a. From standpoint of saving
 - b. From standpoint of efficiency
- II. The rate of interest
 - 1. How determined :
 - a. Supply and demand
 - b. Valuation of the future
 - 2. Why it varies
 - 3. Monopoly power
- III. Source of the interest fund
 - 1. The socialist's view
 - 2. The scientific view
 - 3. The conclusion

Nature of Interest. — Capital is also a factor in production, and the share assigned to it in the general distribution of wealth is called interest. In other words, interest is the return on capital and is paid to the owner of capital for its part in production. That is, if an individual permits his wealth to be used as capital, or refrains himself from consuming it un-

*Its
meaning:
Definition.*

productively, he receives interest for its use. The lender may transfer to the borrower the actual goods which the latter needs for engaging in production, or the money with which the materials and goods may be secured, or the credit which constitutes a claim upon the bank, and which represents the purchasing power whereby the borrower may secure the goods he desires. For this transfer, the lender receives a stipulated sum called interest, over and above the principal, or the money value of the wealth transferred.

Broadly speaking, the returns on investments constitute interest. We must remember, however, that investments, in this sense, do not include land or other natural resources which receive rent for the part they play in production. Then, too, the return on a house or building — not the lot upon which it is built — is not rent, as ordinarily described; this return is interest because it is paid on invested capital. Similarly, the returns on permanent improvements, like canals, are originally interest; while the returns on stocks, bonds, mortgages, bank deposits, and loans constitute everyday forms of interests.

While loans are usually negotiated for productive purposes, they may at times be made for purposes of consumption. But to the lender, the loan is always productive because it is the means by which he secures interest. Loans for production take the form of money or credit through which capital goods, such as factories, machinery, and equipment, are secured. Their purpose is to assist directly in productive enterprise. Loans for consumption may be the result of extravagant living, or may arise from the necessities of life. They are

**Kinds of
loans.**

sometimes called personal loans. If we regard houses as "consumption goods" and not "capital goods," mortgages on such real estate would be considered consumption loans. Loans may also be classified as short- and long-time loans. Short-time loans are loans needed by business men and secured through the banks. The name "call money" is usually applied to them, and their rates of interest fluctuate from day to day according to the conditions of the money market. Long-time loans are loans secured, for example, on real estate. They may also take the form of railroad and government bonds. Their rates of interest are much more stable because of the length of time for which they are issued.

It is important to bear in mind that, primarily, the thing for which interest is paid is the use of capital, and that money or credit merely represents this capital. **Capital and money.** We have seen that capital is a part of wealth used to produce more wealth. Now it is this very fact that capital represents goods engaged in production that entitles its owner to the payment of interest. Tools, buildings, machinery, and other equipment constitute products of past industry which are essential to the process of production, and for the use of which interest is paid. On the other hand, this fact must not be interpreted to mean that money itself is not at times a capital good. On the contrary, we have seen in discussing capital that money is very often such a good. The point to remember, however, is that money derives its importance as a capital good, not from itself, but because it is a medium for securing other capital goods. This is also equally true of instruments of credit. In fact, we must remember that the replacement fund — the fund for replacing worn-out

capital—takes the form of money and credit, and thereby gives mobility to capital.

Why is it necessary to pay interest for the use of capital? Why is it not sufficient for the borrower to return to the

Why lender the exact amount of goods or money
necessary: advanced to him? In other words, what legiti-

*From stand-
point of
saving.* mate reason exists for the payment of interest?

To answer this question it is necessary to review the factors entering into the origin of capital. In an earlier chapter we have seen that capital results from saving or abstaining from present consumption. Now this abstinence involves a sacrifice, and man is loath to make sacrifices for nothing. However, if these sacrifices were not made, an individual, especially in the less highly developed communities, would be apt to consume in the present whatever was produced, and thus no fund would arise for the creation of capital. Therefore, as an inducement for him to save, and as a reward for these sacrifices, he is offered more future value for his present wealth. Instead of spending a thousand dollars to-day, he receives an offer of a thousand and sixty dollars next year. This surplus of sixty dollars is the reward for his sacrifice. If this reward were not made—if interest were not paid—saving would not become general and capital would become increasingly scarce.

If we regard capital from the standpoint of efficiency, we find that the payment of interest is still necessary.

*From stand-
point of
efficiency.* When, in the presence of an already abundant supply of capital, we regard the creation of additional capital as resulting from greater efficiency in production, and not simply from increased saving, we find that interest must be paid, not so much as a reward for present sacrifices, but more as a means of

preserving and increasing the fund of capital. For example, the millionaire's capital must be paid interest in order that it may be preserved. The spendthrift dissipates the fortune of his ancestors, and young men with large fortunes frequently enjoy the reputation of being "good spenders." Although in such cases it would be an exaggeration to speak of interest as being paid for rewarding sacrifices, it is nevertheless evident that it is paid for preserving capital. Should this interest not be paid, the supply of capital we now have would eventually be destroyed. Therefore, whether we regard capital as resulting from saving, or from efficiency, the necessity for the payment of interest still exists.

The Rate of Interest. — Having examined the reasons why it is necessary to pay interest, we are now in a position to consider the factors determining the rate of interest. The price paid for the use of capital — the rate of interest — depends theoretically upon the same set of conditions that determines price generally, that is, upon the law of supply and demand. The rate of interest, therefore, will depend upon the amount of capital — not merely money — as compared with the demand for it. Of course, the element that gives capital its value is its productivity. Because it is productive, capital is in demand. But interest is paid for the use of capital not only because capital is productive, but also because its supply is limited. The rate of interest, therefore, under conditions of free competition, will just be sufficient to equalize the supply of capital with the demand for it.

How determined:
Supply and demand.

We may also consider this problem of the determination of the rate of interest from a psychological point of view.

We have seen that the accumulation of capital involves abstinence and self-sacrifice. Consequently, it is natural *Valuation of the future.* for man to value the present consumption of wealth more highly than its future enjoyment. For example, the present consumption of a thousand dollars' worth of wealth means more to an ordinary individual than a contemplation of its enjoyment a year from now. This is true because the future is so uncertain. Dishonesty, accident, fire, or death may intervene to prevent his actual enjoyment of this wealth in the future. To offset this discount of the future, a premium of sixty dollars, let us say, must be offered him in order that he may be induced to abstain from the present spending of his wealth. This premium is the interest paid him, and just offsets his undervaluation of the future. It is his reward for waiting, and prevents his squandering his wealth in present consumption. If such a premium in the form of interest were not offered, few would make present sacrifices, wealth would be immediately consumed, and little capital would be created.

Now it must be evident that the rate of interest will vary according to the valuation placed upon the future by society. In any given community the rate of *Why it varies.* interest will be low or high according as to whether men in general put a high or low estimate on future values. In older and more civilized countries, because man values the future more highly, the rate of interest is lower than in younger and less civilized countries where the future is greatly discounted. It is likewise apparent that, when the community as a whole is thrifty and places a high valuation on the future, many people will abstain from present consumption and devote a large proportion

of their wealth to productive purposes. This will cause the supply of capital to be plentiful, while the rate of interest will be low. On the other hand, when people place a low estimate on the future, they will consume freely in the present and so reduce the amount of wealth devoted to productive enterprises. This situation will cause capital to become scarce, while the rate of interest will be high. Therefore, when the supply of capital is great as compared with the demand for it, the rate of interest will be low; and, conversely, when the demand for capital is great as compared with its supply, the rate of interest will be high.

So far we have considered the factors determining the rate of interest under conditions of free competition. The principle of the productivity of capital has **Monopoly** been sufficient to explain the phenomenon of **power.** interest. In fact, this principle forms the basis of the whole theory of interest. However, it must not be forgotten that, in everyday life, the capitalist attempts to secure the highest possible rate of interest regardless, if possible, of the laws of competition. The exaction of usury, for example, is an evil as old as society itself, and the "money-lender" is still held up to scorn and ridicule. In modern societies, we have also the presence of the capitalistic monopolist, who is, indeed, much more dangerous to society than his ancient counterpart. We have seen that one illegitimate cause of the inequalities of income has been attributed to the exercise of monopoly power by the capitalist. Through the concentration and control of large sums of capital, the monopolist is sometimes enabled to secure a larger share of the social income than the productivity of his capital warrants. The presence of mo-

nopoly, therefore, is one of the disturbing factors sometimes entering into the problem.

Source of the Interest Fund. — There remains yet to be examined the source of the interest fund. Whence comes the fund from which interest is paid? We have just seen why it is necessary to pay interest, and the factors involved in determining the rate of interest. But how does society secure the means with which to pay this sum necessary for the use of capital? Does capital get it by robbing labor? If so, labor is exploited by capital, and that which should go to the laborer in the form of wages the capitalist appropriates as interest. This view is apt to be popular with the so-called laboring class. They are often willing to believe that the payment of interest deprives them of their full wages. Sometimes, too, this may actually occur. When large dividends are paid on "watered" stock, and when, through monopoly, an unfair advantage is taken of labor, there exists the possibility that so-called interest is paid at the expense of wages.

As opposed to this socialistic belief, we have the scientific view that capital creates its own fund from which interest is paid, just as labor produces the wealth from which wages is paid. Capital, to-day, plays as great and powerful a part in the productive process as the other requisites of production. Interest, then, may be paid without infringement on the rights of labor from the extra fund of wealth that capital has created. If a merchant, for example, by making his store more attractive, that is, by adding to its capital and appointments, increases his business through the efficiency of capital, the extra return thus resulting furnishes the fund from which interest is paid. Thus, through increased output,

**The social-
ist's view.**

**The
scientific
view.**

brought about by increased productivity of capital, interest is legitimately provided.

In the United States, the productivity of capital has been sufficient to meet the needs of a growing civilization. Not only has capital produced its own interest, but it has of course also produced its own replacement fund. This it has been easily able to do because of the newness of the country and the richness of its frontier. It must be remembered that interest, like wages, is fixed at the no-rent margin of production, and that the productivity of capital is reckoned as marginal. If this margin is comparatively productive, capital will likewise be productive. In the United States capital has been more than ordinarily productive at this margin. Because of this fact, interest has been higher in this country than in Europe. The productivity of capital has also been greatly enhanced in the United States through the effect of inventions, and through the efficiency of the industrial organization brought about by the great American entrepreneurs.

QUESTIONS FOR RECITATION

1. What is interest? In what three forms may capital be loaned?
2. What is the most usual method of borrowing capital? Why?
3. Give several examples of interest in everyday life.
4. How do consumption and production loans differ? Give examples.
5. What is "call money"? What are mortgages? Government bonds? Why do rates fluctuate for the first?
6. Explain clearly the relation between capital and money. For which is interest paid?
7. Would people save if interest were not paid? State your reasons. How would capital be affected?

8. How can the payment of interest be justified in the case of capital borrowed from millionaires?
9. What determines the rate of interest? Explain the principle.
10. What bearing has man's valuation of the future upon the rate of interest?
11. What is the connection between the valuation of the future and the law of supply and demand?
12. Why is there a higher rate of interest in Mexico than in New England?
13. Why was it necessary for the United States government to advance the rate of interest on the different Liberty Loans it "floated" during the World War?
14. Explain the influence of monopoly power upon the return on capital.
15. What is the socialist's view of the source of interest?
16. What is the accepted economic doctrine of the source of the interest fund?
17. Why has capital been more than ordinarily productive in the United States?

PROBLEMS FOR DISCUSSION

1. If private property in capital were abolished, would interest be necessary?
2. Discuss the importance of the principle of productivity in the theory of interest.
3. Show in detail the services rendered to production by capital.
4. Can any part of the earnings of a bootblack be called interest? Why?
5. When a company declares an unearned dividend, is the stockholder getting interest?
6. Can law fix the rate of interest at any desired point? Explain your answer.
7. Why does the rate of interest vary at the same time in different countries? In different businesses?
8. The savings of the American people average a billion dollars a year. What and where are they? What return do they yield?

9. Is interest different from usury? If so, what is the difference?
10. Why has the rate of return on investments often been ten per cent in the West, seven per cent in the Central states, and five per cent in New York?
11. It is said that interest is paid for capital, not for money. Is this true? State your reasons.
12. What is the effect on the rate of interest of a rising standard of living?
13. What effect did the World War have upon the rate of interest? Why?
14. State in summary form the theory of interest.
15. What is meant by marginal productivity of capital?
16. Why must capital produce its own replacement fund as well as interest? How do corporations manage this problem?

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CHAPTER XLIII

THE THEORY OF PROFITS

- I. General character of profits
 1. Meaning of profits :
 - a. The ordinary meaning
 - b. The economic meaning
 2. Nature of managing ability :
 - a. Its requisites
 - b. The entrepreneur
 3. Nature of profits :
 - a. Why the special term is used
 - b. Its relation to risks
- II. Law of profits
 1. Grades of entrepreneurs :
 - a. Those of phenomenal power
 - b. Those of unusual ability
 - c. Those of ordinary capacity
 2. The "no-profit" class
 3. Degrees of profits :
 - a. How they are measured
 - b. An example from the diagram
 - c. What "no-profit" class receives
 - d. The law summarized
 4. The conclusions :
 - a. Under free competition
 - b. Under a monopoly régime

General Character of Profits. — We come now to an analysis of one of the shares in distribution that, up to this point, in order to avoid confusion of thought, we have purposely refrained from mentioning. This share is known

as "profits." Like rent, the word profits, as used in economics, has a meaning distinct from that usually attributed to it. In ordinary language the term profits is sometimes used to designate the total gains of a man in business, regardless of whether they represent rent, or interest, or wages. For example, a small merchant may own his land, his store, and contribute his own labor. At the end of a year his total gains may amount to one thousand dollars. These he may consider as one, and call the whole income profits. But, after our discussion of rent, wages, and interest, it will readily be seen that this loose phraseology would be misleading and unsatisfactory to the economist.

Meaning
of profits:
Ordinary
meaning.

In economics, the word profits is dissociated from any of the other shares in distribution. Instead, therefore, of representing a loose union of the other forms of income, it stands for a distinct return on a special agency in production. In the above illustration, for example, the amount which the small merchant has remaining, after he subtracts from his sum total income the shares that land, labor, and capital are entitled to, is characterized by the economist as pure or net profits. It represents a surplus of wealth over and above the returns on the three factors of production. This extra return is due to the superior managing ability of the independent business man, and is appropriated by him for that reason. Profits, therefore, are the return on managing ability.

Economic
meaning.

To understand more clearly the character of profits we must thoroughly comprehend the nature of managing ability. Managing ability implies two things, (1) a special kind of labor or ability, and (2) something to manage. The basis of this special ability may be inherited and thus

form a nucleus for future development. It must, however, be developed. Managing ability does not spring, full grown, from the head of the would-be manager. Undoubtedly it exists, in varying degrees, in the inherent natures of different individuals. But to develop managing ability up to the point required by efficient business organization there is required great skill, technical knowledge, and an insight into human nature that result only from years of experience and special training. Skill, judgment, initiative, insight, efficiency, — all are required in managing ability. Furthermore, for the exercise of this ability, there must naturally be “something” to manage. Now this something is made up of the land, labor, and capital required in productive enterprise. A site must be had for the factory; the building, raw materials, and equipment must be provided; the labor force must be secured. Consequently, managing ability represents a united control of these factors of production. It is not necessary that the industrial manager own all the land and capital which he manages, although it is perfectly possible for him to be the owner as well as the manager. Ordinarily he is intrusted with the management of capital contributed by hundreds of stockholders as well as of that furnished by himself.

In order to individualize the industrial manager still more clearly, the term entrepreneur or enterpriser is applied to him. In a general way, he represents the independent business man, and manifests all degrees of ability. However, we are accustomed to think of the entrepreneur as possessing the qualities required in the highest forms of industrial enterprise. Here, in addition to the characteristics of managing ability already

mentioned, the entrepreneur is found to be resourceful, daring, and even imaginative. Consider, for a moment, the qualities required in the great railroad builder, or in the organizer of a great steel industry. These men must possess not only unusual skill and efficiency, but they must be made of such stuff as will remain undaunted in the face of seemingly unsurmountable difficulties, unmoved by ignorant or unjust criticism, and capable of visualizing great dreams of empire.

Such is the entrepreneur whose reward we term profits. While we must always regard profits as the return on managing ability, we may view managing ability as a kind of labor, and, therefore, consider profits as a specialized form of wages. This view has sometimes been taken, but it is found to be confusing. It is, of course, true that the incomes of our great American managers are made up largely of the returns on their industrial effort in the form of organizing and managing ability. Hence, it might be argued that, since managing ability is only another form of labor or industrial effort, its return in the form of profits is only another form of wages. However, it would be most confusing to speak of the wages of a fireman and of the wages of a railroad organizer. To avoid this confusion of thought, we differentiate managing ability from ordinary labor, giving it a distinct classification as a separate factor of production, and we apply to its return the special term profits.

If we are looking for a synonym for managing ability, it may better be found in the phrase "risk-taking." In fact, risk-taking is almost synonymous with business enterprise, which is the peculiar field of the entrepreneur. The independent business man, *i.e.* the

Nature of profits:
Why the term is used.

Relation to risks.

entrepreneur, is constantly taking risks. This element is eliminated from rent, and wages, and interest; but it is a most potent factor in the activities of enterprisers. The enterpriser himself contracts to pay definite sums for his building site, his factory, and his labor force. No element of risk enters into the returns on these factors. They must be paid. It is only the return to the entrepreneur that involves the element of risk. If he has had a successful year, his returns, over and above the stipulated sums he has contracted to pay for rent, interest, and wages, will be large and his profits great. If he has had a disastrous year, his losses, unless covered by specific insurance, will be great. In either case, when he assumes the risk, he accepts the consequence of success or failure. In this sense, therefore, profits may be said to be the reward for risk-taking.

Law of Profits. — We are now ready to consider the question of how profits are determined. Why should the profits of one industrial manager differ from the profits of another? To answer this question we must first examine differences in managing ability upon which these profits depend. While managing ability is of multitudinous kinds and degrees, entrepreneurs may, in general, be conveniently grouped into three or four classes. At the head of the group of industrial managers are those who possess phenomenal managing ability. They stand out in bold relief against the background of normal power in industrial management. Had a man of this phenomenal power in business a corresponding ability in art or literature, he would become as famous as Michael Angelo or Shakespeare. He is the genius in all kinds of business enterprise. It is needless to say that the number of men in this class is extremely limited. Next to the men of

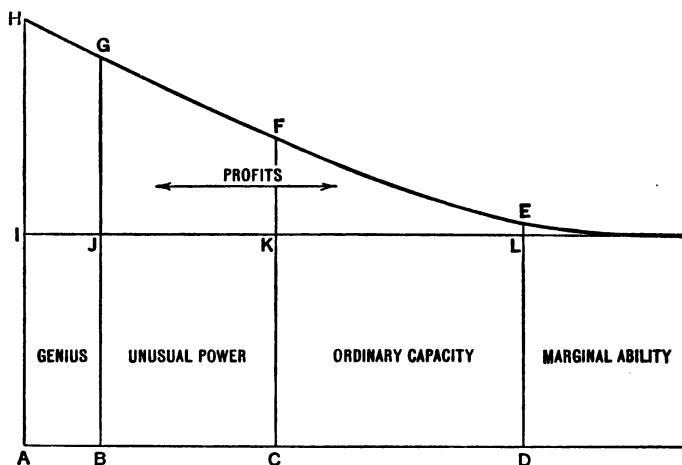
Grades of
entrepreneurs.

phenomenal power come those of unusual managing ability. They are men of talent, but just fall short of possessing industrial genius. They comprise the second group of foremost industrial organizers and leading merchants and manufacturers in the country. Next to these come the men of ordinary capacity in industrial management. They are successful and independent business men, well known in their respective communities. The number of men in this class is quite large.

Finally, in the general group of entrepreneurs, come the men of minimum managing ability. They are on the margin of business enterprise and, as entrepreneurs, they make no more profits than, as laborers, they would command wages. Consequently they hover about the margin of business independence, — sometimes venturing out for themselves, and, again, seeking employment under cover of some one's management. Under these conditions, therefore, they may be said to possess only marginal ability. The term "wages of management" is used to distinguish their return from that of the more successful entrepreneurs, for whose return the term profits is reserved. Hence, it is often customary to speak of entrepreneurs of marginal ability as the "no-profit" class of entrepreneurs.

The different grades of managing ability, and the profits they respectively command, may be represented by a diagram with the principle of which we are already familiar. From this diagram it will be seen that the principle which determines degrees of profits is similar to that determining differences in rent. Just as we have different grades of land with varying productivity, so we have different classes of entrepreneurs with varying

capacity. As we measure rents on the basis of the return on "no-rent" land, so we measure profits on the basis of the return on the "no-profit" class of entrepreneurs. For example, the man D, in the diagram, has a return on his effort represented by the line DE. Of this return DE, LE represents profits and is known, in economics, as marginal profits. The man A, however, has a much larger return, represented by AH, of which IH is profits. In both



cases the return of these men on their managing ability, that is, their profits, has been measured by using the return of the "no-profit" class with marginal ability as a common basis of comparison. It will be seen, therefore, that these men of marginal ability, used to represent the "no-profit" class of managers, serve the same purpose as the "no-rent" land in the theory of rent. It must be remembered, however, that this "no-profit" class, just like the "no-rent" land, has some return for its effort; but this return is called "wages of management" to distinguish it from pure

profits. Therefore, the law of profits may be thus summarized; the profits of any given entrepreneur will be the difference between his return and the return of the "no-profit" class of entrepreneurs.

In the manner of their determination profits, then, resemble rent. Both are differentials based on marginal cost of production. Therefore, under conditions of free competition, neither determines prices, because prices are fixed on the margin of production by marginal producers. Under the competitive system, pure profits cannot affect prices because, as we have seen, marginal producers receive no such profits, but obtain merely wages of management for their labor and current rates of interest for their capital. Prices are therefore fixed, theoretically, at the point where true profits do not exist. The successful entrepreneur's pure profits depend upon his superior efficiency and the superiority of his managing ability over that of marginal producers, or the no-profit class of entrepreneurs. When competition is freely at work throughout society, profits are a surplus of wealth secured by superior managing ability in the production of a commodity at a cost lower than that represented by the price charged at the margin of production. The superior entrepreneur secures profits when he sells goods at prices representing marginal cost of production.

The conclusions:
Under free competition.

Now all of this is true when we deal with ideal conditions of pure competition. When, however, we consider a society in which monopoly power — price-fixing power — is known to exist, we have to reckon with an entirely different set of conditions.

Under a monopoly régime.

With the introduction of the element of monopoly, prices are no longer, as a matter of fact, determined simply at

the margin of production. In a monopoly régime, the importance of marginal producers in fixing price is of less significance than the monopoly power of the great entrepreneurs, who often fix monopoly prices without any regard to the marginal cost of production, at the highest point consistent with the greatest monopoly gain. Monopoly profits are therefore entirely different from competitive profits. In discussing "Price and Monopoly," under Problems of Exchange, we have made frequent references to the effect of monopoly power on prices, that is, to monopoly profits. Should this monopoly power increase, and should prices continue to be forced above a competitive level, much of our social income may be converted into the profits of the entrepreneur. Uncontrolled monopoly power is distinctly antagonistic to social welfare, and society must learn to protect itself against this social menace.

QUESTIONS FOR RECITATION

1. How is the term profits popularly misused?
2. Distinguish economic profits from the other shares in distribution. Give examples.
3. Why is profits regarded as a distinct share in distribution?
4. Why is profits a surplus?
5. Name some of the characteristics of the entrepreneur. How are these secured? Name half a dozen great entrepreneurs.
6. Does the entrepreneur own the land or capital which he manages? Explain your answer.
7. Why are not profits considered as identical with wages?
8. If there were no risks, would there still be profits? Explain the relation between the two.
9. Why do profits vary? Give some illustrations.
10. Describe the different grades of successful entrepreneurs.
11. Explain the meaning of the "no-profit" class. What does this class receive?

12. Draw a diagram, and explain from it the theory of profits.
13. How do we measure differences in profits? Why do we speak of profits as a differential?
14. Summarize the law of profits.
15. Under free competition, do profits affect prices, or do prices affect profits? Why?
16. How is the theory of profits upset by the growth of monopoly power?
17. How may society control monopoly profits? Why is this not done?
18. What is meant by "profiteering"? Could the high prices of the World War period be properly accounted for on this basis alone? Give reasons.

PROBLEMS FOR DISCUSSION

1. What are the chief elements in business enterprise?
2. Do unsuccessful employers pay less wages than those who make larger profits? State your reason.
3. What is the effect of competition on profits? Of monopoly power?
4. What devices do entrepreneurs sometimes employ to escape competition? What are the social effects?
5. What do you think has been the basis of most of the more recently acquired large fortunes in this country? Give some examples.
6. The syndicate which underwrote the securities of the U. S. Steel Corporation is said to have made over \$40,000,000. Was that profit? Do you think it was earned?
7. Are the profits of a business man a good measure of his service to society in the production of wealth? Defend your position.
8. Do profits tend to an equilibrium as between different individuals? Different occupations? Different places?
9. Is a restriction of profits ever justifiable? Why or why not?
10. What are the arguments for and against an excess-profits tax?
11. Describe the various means society may employ to distribute profits more generally throughout the community.

12. Name some field of production where the returns are in the form of profits.
13. If the marginal producer receives no real profits, why does he continue in business?
14. Do profits resemble any other share in distribution? Why?
15. Is the entrepreneur entitled to a great fortune? Why?
16. What is the difference between gross profits and net or pure profits?
17. In your opinion, have any great fortunes ever been made through monopoly profits unfairly secured?
18. Apply, as a remedy, the inheritance tax to the above problem.
19. How is private monopoly different from public monopoly?

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CHAPTER XLIV

THE OUTLOOK FOR LABOR

- I. Labor's monopoly power
 1. Individual monopoly power :
 - a. Acquired capacity
 - b. Inherited capacity
 2. Group monopoly power :
 - a. Meaning and example
 - b. Where and how exercised
 3. The outlook in the United States
- II. Labor's power of substitution
 1. From standpoint of consumption :
 - a. Meaning and examples
 - b. The consequence
 2. From the standpoint of production :
 - a. Meaning of mobility of labor
 - b. Examples of this mobility
 3. Double effect of this power on labor :
 - a. As producer
 - b. As consumer
- III. Relative rates of increase of the factors of production
 1. Importance of rate of increase
 2. Conditions in United States :
 - a. Before the World War
 - b. After the World War
 3. General conclusion

In concluding a discussion of the theory of distribution, it is important to understand the probability of the different shares of wealth increasing or diminishing. From the

standpoint of social welfare, the future of labor is especially significant, because the great mass of people depend altogether upon wages for their support and material happiness. In determining what chance labor has of increasing its share in the general distribution of social income, it will be found that, aside from the principle of productivity, much will depend, (1) upon the growth of labor's monopoly power, (2) upon the exercise of its power of substitution, and (3) upon its rate of increase as compared with that of the other factors of production.

Labor's Monopoly Power. — In the lowest group of laborers we have seen that there exists comparatively little monopoly power, and that competition, therefore, fixes the wage almost at the minimum of subsistence. In all the other groups, however, monopoly power plays a considerable part in determining the upper limit of wages. This monopoly power of labor may be exercised either individually or collectively. The individual may possess this unusual control over the price of his labor either as a result of special training, or by reason of some inherited tendency that has been developed and cultivated. For example, the man who has made a technical study of the textile business at home and abroad, who has a thorough grasp of business detail and knows how to manage large numbers of men, possesses by reason of his training a great monopoly power. This power enables him to command a salary of perhaps twenty-five thousand dollars a year. In a similar manner the man who, through inherited ability and later training, is able to draw striking cartoons and caricatures enjoys such a great monopoly power that he may be able to command a salary of twenty thousand dollars a year. The monopoly

**Individual
monopoly
power.**

power of the cartoonist was originally inherited, while that of the manager was subsequently acquired; in both cases, however, it was individual.

Group monopoly power, on the other hand, is of quite a different character. In this case labor relies for its control over wages, not on great individual power, but on collective action. Group monopoly is the power whereby a group, through organization, ^{Group monopoly power.} is able to control the price of labor and to regulate its own wages. For example, suppose a number of carpenters are working for ninety cents an hour; and suppose further that there are no other carpenters near by, and that there is plenty of construction work in the neighborhood. It occurs to these men that if they unite together and demand \$1.10 an hour they will be able to increase their wages. This they do and, by their organization, create a monopoly power which enables them to secure the additional wage demanded. Among skilled laborers the monopoly power of organization is everywhere in evidence, and competition plays a secondary part in determining wages. This monopoly power may be exercised not only through the union and strike method, but also through minimum wage laws such as exist in Australia and New Zealand.

In America, there are many evidences of the monopoly power of labor. From the standpoint of individual monopoly, the emphasis on industrial education and special training is a most hopeful indication for the future of labor. Everywhere the necessity for increased efficiency is being pointed out and the means of securing it provided. At the same time, the monopoly of organization is becoming more and more powerful. Men are beginning to realize how much more

The outlook in United States.

can be accomplished by collective bargaining than by individual action. Thus, through the increase both of individual and group monopoly, labor possesses a means of enlarging its share of the social income.

Labor's Power of Substitution. — Another advantage that labor enjoys is found in the exercise of its power of substitution. This power is simply the ability of labor to substitute one good for another, or one employer for another. For example, when the price of oil becomes too high, gas or electricity may be substituted. If the price of soap is raised, a washing powder may be used. When meat rises to a prohibitive figure, some other form of proteid diet may take its place. In this manner, by substituting one product for another, the consumer escapes the extortion of the monopolist, and labor, by forcing prices down, gets the benefit of income that would otherwise go to the monopolist in the form of monopoly profits. Labor's real wages are increased.

Again, by reason of its mobility and monopoly power, labor may substitute one employer for another. By mobility of labor is meant the freedom with which labor moves from one place to another, and from one employer to another. In the days of feudalism, the serf was attached to the soil and was prevented from moving from place to place. The peasant was born an agricultural worker on a great estate, and there he was obliged to live and die. To-day, however, in the United States, a laborer moves easily from place to place, from employer to employer, and even from one occupation to another. If he is dissatisfied with conditions in one city or under one employer, he seeks employ-

From
standpoint
of con-
sumption.

From
standpoint
of pro-
duction.

ment in a new locality, or under new leadership, where the returns or conditions are more to his liking.

An advancing standard of living always impels labor to seek that industry or locality where it will receive its greatest reward. The labor union, through its monopoly power of organization, makes secure this higher standard of living when it is once attained. This mobility of labor naturally results in more or less uniformity of wages within the same general group of laborers; but, nevertheless, there is just enough difference in real wages to cause labor to substitute one employer for another. This power of substitution may be used against the employer and in favor of labor because, by reason of the growth of labor organization, the employer himself cannot substitute, as freely as in former days, one laborer for another. As producer, therefore, labor may use the power of substitution, in conjunction with its monopoly power, to fix its own wages; while, as consumer, labor may use this same power to increase its income by preventing the entrepreneur from fixing prices at the monopoly point in order to swell his own profits.

Double
effect of
this power
on labor.

Relative Rates of Increase of the Factors of Production. — Still another element favorable to the increase of wages is found in the relatively slow rate at which labor may increase, when compared with the other factors of production. In order that the wages of labor may increase, the relative value of its share in the general distribution of wealth must, of course, become greater. Now, the value of the share of any factor of production, — whether land, labor, or capital, — depends, so far as these factors alone are concerned, upon its rate of increase as compared with that of the other factors of

Importance
of rate of
increase.

production. Scarcity plays an important part in determining the value of labor, just as it does in determining the value of gold or silver. If gold, for example, is scarce, its value will be great, while, if plentiful, its value will decrease. Just so it is with labor. If labor increases at a relatively slow rate, its value as measured in wages will be great, while if its rate of increase is relatively rapid, its value will decrease.

Now in the United States, during the past century, there were certain tendencies observable in the relative rates of increase of land, labor, and capital. During that period capital increased so enormously that the rate of interest steadily declined. Through the opening up of new lands and the wonderful improvements in agriculture, land likewise yielded a greater and greater return. However, labor, the remaining factor of production, increased at a rate which appeared relatively slow when compared with capital's rate of increase, or land's rate of increase. Evidence of this slow rate of increase was frequently found in utterances against "race suicide." In fact, only through immigration was the gradual decline in the birth rate offset. Therefore, if during that period labor's rate of increase was slower than that of capital or land, it was possible, in the absence of exploitation, for labor's share of the social income to increase at a proportionally greater rate than that of the other factors of production.

What influence had the World War upon these relative rates of increase of the productive factors? Confining our attention solely to America, and dealing only with the obvious facts of warfare, it seems evident that its reaction was not relatively unfavorable

Conditions
in United
States:

*Before the
World War.*

*After the
World War.*

to labor. Needless to say, the great conflict struck at all three factors of production. Natural resources were recklessly appropriated, capital was destroyed in spite of the increase in money and bank savings, and labor was diverted from productive to destructive channels. It is safe to say, therefore, that the returns on all three factors were unusually affected during this period. This fact is equally discernible when applied to the returns on capital and labor. In floating United States Government Bonds, for example, the rate of interest had to be steadily advanced, and, in the employment of labor, higher wages had to be constantly offered. While it is too early at present to obtain a proper perspective of the general problem of the comparative rates of increase of all three factors since the close of the World War, labor does not appear to have been affected in a relatively unfavorable manner so far as its distributive share is concerned.

Briefly stated, the problem of distribution may be thus summarized: Rent is paid to the landlord because of his control over natural resources. Interest goes **General** to the capitalist in return for the use of capital **conclusion.** in industry. Profits are paid to the entrepreneur because of his managing ability and the risks he undertakes. Wages, finally, are paid to the laborer in return for industrial effort and in proportion to his productive and monopoly power. But, while all these shares are thus divided up in theory, they are not always so separately distributed in practice. One individual, by representing several factors of production, may receive several shares in distribution, while another individual may receive but one share. In America, this may be slowly taking place. Broadly speaking, the laborer usually re-

ceives only one of these shares — wages — while the entrepreneur frequently takes the rest. As American society evolves, the landlord controlling natural resources, the factory owner controlling capital, the entrepreneur taking risks, and the monopolist controlling prices, all tend to become the same person. Through large scale production, one business interest may control all the important processes of industry from the raw to the finished product, and, through its united control over land and capital, may take into one treasury the different incomes from several distributive channels.

QUESTIONS FOR RECITATION

1. Define monopoly power as applied to labor. Give examples.
2. Distinguish between individual and group monopoly power. Which is more prevalent? Why?
3. Under a régime of pure competition, would monopoly power develop? Prove your position.
4. How is individual monopoly power acquired? Group monopoly power? In what group or groups of labor is each chiefly found? Why?
5. Do you think labor is or is not developing too much monopoly power at the present time? Why?
6. Has labor more monopoly power in England or in the United States? Why do you think so?
7. Why are men in the public service discouraged or prevented from exercising group monopoly power? Do you agree with this point of view?
8. Define labor's "power of substitution." How may this be used to labor's advantage, (1) from the standpoint of production, (2) from the standpoint of consumption?
9. Why cannot the employer use this power as effectively as the laborer?
10. From the standpoint of consumption, what did the World War teach the American people with regard to the power of substitution?

11. Why is the power of substitution a two-edge sword in the hands of labor?

12. What connection is there between a factor's rate of increase and its return?

13. When the rates of increase of the three factors vary, which one will derive the greatest relative advantage — the one with the slowest or fastest rate of increase? Why?

14. At the close of the nineteenth century, how had the three factors relatively increased? What was the effect of this upon labor?

15. Has interest or wages recently advanced more rapidly? Why?

16. Give a brief summary of the general theory of distribution.

PROBLEMS FOR DISCUSSION

1. What reasons can you offer to explain why the wages of women are generally lower than the wages of men? Is this justifiable?

2. What conditions fix the maximum limit to the rate of wages in a particular case?

3. Is there any connection between the American rate of wages and American inventions?

4. By what methods is labor increasing its monopoly power?

5. Name the factors in modern society which increase the mobility of labor. Discuss their relative importance.

6. What effect should the increased mobility of labor have on wages in different sections of the same country? Why?

7. Ordinarily an increased demand for a commodity which is not absolutely limited in amount will result in an increased supply. To what extent would this be true of laborers? Of labor?

8. Cite cases of monopolistic limitation of labor.

9. Explain the operation of the power of substitution.

10. What factors limit the power of the entrepreneur over labor?

11. How may labor force prices down through the exercise of the power of substitution?

12. How does an advancing standard of living affect wages? By what means is this accomplished?

13. Was the condition of labor in America in the nineteenth century better or worse than its condition in the eighteenth century? Why?

14. What promise has the twentieth century for labor? Why?
15. What did Henry George emphasize as the cause of poverty? Do you think his diagnosis was correct? Does rent affect wages?
16. Has the entrepreneur's return increased much in the last half century? Has this affected wages? Give your reasons.
17. Point out the consequences of the World War upon labor and wages.

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PART SIX
PROBLEMS OF ECONOMIC REFORM

CHAPTER XLV

EXPERIMENTAL PROGRAMS

- I. Profit sharing
 - 1. Its meaning
 - 2. Its different forms
 - 3. Its American status :
 - a. Some examples
 - b. The difficulties :
 - (1) Mobility of labor
 - (2) Number of unskilled workers
 - (3) Financial stress
 - 4. The outlook
- II. Welfare work
 - 1. Its meaning
 - 2. An example
 - 3. Recent improvements :
 - a. In factories
 - b. In stores and railways
 - 4. Its future
- III. Coöperation
 - 1. Its usual forms :
 - a. Coöperative banking
 - b. Coöperative consumption :
 - (1) Its English origin
 - (2) Its American development
 - (3) Its advantages

(4) Its difficulties

c. Coöperative production

2. Outlook for coöperation

A study of American economic life would not be complete without a discussion of the leading economic experiments and programs that have, as their common purpose, the improvement and betterment of the life of the individual and of the community. Some of these are more experimental than fundamental in character. The experimental programs may be grouped under the head of profit sharing, welfare work, and coöperation.

Profit Sharing. — This attempt to improve the condition of the worker originates with the employer, either from a sense of social justice, or because he believes he will himself be the ultimate gainer by this policy. The system of profit sharing guarantees the worker, in addition to regular wages, a specified share of the profits of the business. In other words, it presupposes the payment of wages, and then shares the net profits with the workers in a certain predetermined proportion, — the employer voluntarily giving up part of his profits in order that the laborers under him may participate in their enjoyment. The simplicity of profit sharing is greatly in its favor.

Profit sharing usually takes one of the three following forms: (1) the employee participates in the ownership of the stock; (2) the employee (chiefly in England and in the United States) is given extra compensation in proportion to his wages and year's labor; (3) the employee enjoys a system of deferred participation in profits. Under this last-named system, each year a percentage of the profits is credited either to the entire

body of employees, or to specific employees. In cases where the percentage of profits is credited to employees as a unit, profit sharing takes the form of a provident fund. In order to share in this fund, the employee must be sick, injured, or in some other condition of need. In cases where profits are credited to employees individually, each receives his share either when he attains a specified age, or when he has remained a certain time in the establishment, or when he suffers an unusual economic pressure from sickness or accident. This system, extensively employed in France, has received little encouragement in English-speaking countries.

In the United States, profit sharing may be said to be in its infancy. In the last quarter of the nineteenth century, various experiments in this field were begun by the A. S. Cameron Company of Jersey City; by the Brewster Carriage Company of New York; by the Peacedale Manufacturing Company; and by the N. O. Nelson Company engaged in the manufacture of plumbing goods. On the whole, these early experiments were on a comparatively small scale, and not altogether successful. Later much more progress was made in this direction by many other corporations, among which may be mentioned the Stetson Company of Philadelphia, hat manufacturers, the American Rolling Mill Company of Middletown, Ohio, manufacturers of sheet metal, and the United States Steel Corporation. However, it was the Ford Motor Company of Detroit that gave this movement its greatest impetus. As early as 1914, this company announced its intention of distributing \$10,000,000 annually among the workmen and employees of the establishment in addition to their regu-

*Its American status:
Some examples.*

lar wages. If this example should be followed by other great manufacturers, and profit sharing should be generally conducted on such an extensive scale, the success of this method of sharing profits would be instantaneous.

However, the other forms of profit sharing are not so simple in their method of application. Especially do they present certain difficulties when applied to American workers. To begin with, from an American standpoint, the system of sharing profits, through deferred payments, has an obvious disadvantage. It implies that a given employee will remain under an employer for a long period of time. In America, we have seen that this is frequently not the case. Labor is mobile, moving from place to place and from employer to employer. This mobility of labor is one of the means employed for its betterment. Seldom do wageworkers remain twenty years under one employer. A system of deferred payments, however, works on the principle that men will devote nearly their whole lives to one employer.

Again, this system works best in trades where workmen are highly skilled and intelligent. In the average American industry a common labor group is coming more and more rapidly to the front. This group works with its hands and neglects its head. The deferred payment system would not appeal strongly to its members. At best, business is uncertain; and the average employee does not relish the idea of working on the deferred payment plan for a firm which may become insolvent at any time and in this manner deprive him of the chance to share in the fund of profits.

The system, sometimes in vogue, of sharing profits with employees by requiring them to be owners of the com-

pany's stock before they are allowed to share in the profits has a serious financial drawback. This plan is well-nigh out of the question for the lower grade of wageworker who has a family dependent on him. He needs all his income to maintain a decent standard of living, without investing part of it in the company's stock. If, however, he does succeed in participating in stock benefits, his interest will naturally be centered in that particular business so that his freedom of action is curtailed. In fact, this particular feature of profit sharing is rather paternalistic and opposed to the freedom and mobility of American labor.

Nevertheless, profit sharing, when applied to the worker in the most direct manner, is capable of producing excellent results. So long as the wage system continues, profit sharing may be utilized to remedy The outlook. many of the inequalities of social income. In fact, this method may become generally employed by the great entrepreneur to establish a true partnership of labor and capital in business. By this means, capital secures an added interest in the business on the part of the worker; while labor receives a larger share of remuneration for services rendered. When profit sharing is conducted on this principle, it means higher efficiency, greater loyalty for the employer; and keener interest, higher income for the worker. Such a combination is sure to be beneficial to production.

Welfare Work. — Another economic experiment, much less fundamental though far more common than profit sharing, is welfare work. This is defined by Professor John R. Commons as "all of those services Its meaning. which an employer may render to his work people over

and above the payment of wages." Employers have always done some welfare work, but until recently such efforts were practically unknown to the general public.

With the advent of the National Cash Register Company, however, and its attempts to provide abundantly for the

outside wants of its employees, attention was

An example. widely attracted to the good results of welfare work. This company, employing many skilled and highly efficient men and women in the manufacture of a very complicated machine, decided that it would be advisable to adopt every means to develop their interest in the company and to make them more efficient workers. In order to carry out this design, sanitation was bettered and factory conditions improved in many directions.

Within the past few years, factory construction has been revolutionized. The old style factory was a building. The new style factory is a factory, planned

Recent improvements: to serve that definite purpose. When the old,

In factories. factories were built, men wanted a building in

which their employees could congregate and work. The progressive modern manufacturer builds a structure calculated to fit the peculiar needs of his business, and, in addition, makes every provision for the health and safety of his employees. In pursuance of this idea, he provides sanitary and comfortable buildings, educational institutions, religious centers, insurance funds, co-operative stores, and means of recreation after factory hours.

The factory does not furnish the only instance of welfare work. The modern department store is establishing restrooms and improved lavatories and providing schools, reading clubs, military organizations, singing

societies, and many other forms of social gathering for the benefit of the employees. The railroads, too, have done much good by providing "bunk" houses for employees, when they are at the end of "runs" and away from home. The men under such circumstances often have no convenient place to go. The railroad, by furnishing sleeping rooms, amusement rooms, books, and other attractions, provides for the material comfort and welfare of its employees.

*In stores
and rail-
ways.*

Undoubtedly the greater part of welfare work is conducted for purely business reasons. Employers have found that it pays. Some concerns, however, which enjoy very great financial advantages, are able to carry on welfare work among their employees with a more general end in view. The United States Steel Corporation, for example, spends nearly \$6,000,000 annually on this kind of welfare work. But, for the great majority of employers, this is impossible. The feeling in favor of welfare work is undoubtedly spreading, and, whatever one may think of the objects underlying its establishment, its results are certainly advantageous to both parties. Like profit sharing, welfare work depends upon the employer for its initiation and success. But unlike profit sharing, welfare work has taken a strong general hold on American business men, and constitutes one of the modern divisions of every great industrial undertaking. Its success rests primarily upon the fact that it is regarded, not as philanthropy, but as a means of increasing industrial efficiency.

Its future.

Coöperation.—Under this head are included certain efforts which the worker himself has made to improve his own condition. The American's spirit of independence

has manifested itself in initiating various experiments for his own betterment, without depending merely upon its usual help received from the employer or from the forms: public. One attempt in this direction has been in the form of coöperation. From this standpoint, coöperation means the association of persons for the purpose of joint economic effort. Coöperative enterprises usually assume one of three forms: (1) coöperative banking, (2) coöperative consumption, and (3) coöperative production.

Coöperative banking is an attempt to secure certain financial benefits through associations of individuals in the form of insurance companies, building societies, or fraternal organizations. From the organization of the first Mutual Fire Insurance Association in 1752, the growth of this kind of coöperation has been rapid in the United States. To-day it is everywhere prevalent in the form of assurance societies, building associations, lodges, and fraternal societies. The chief purpose of the protective organizations is, of course, to pay certain benefits in case of death, accident, and sickness; while the building societies enable thousands of Americans to purchase their own homes. All of these associations have met with considerable success.

Coöperation in consumption is the association of individuals for the purpose of securing certain advantages in the purchase of goods. The coöperative store is a good example of this kind of coöperation. This economic experiment had its origin in England among a few poor weavers of Rochdale, who contributed to the purchase of a bag of flour. By this means, retail quantities of flour were secured at whole-

sale prices. From this small beginning the coöperative movement in England has grown until, to-day, it numbers its members by hundreds of thousands. In memory of its originators, the coöperative society in charge of the system is called the "Rochdale Pioneers."

In America, however, this movement of coöperative consumption has never attained a like development. The numerous experiments undertaken in this direction have usually failed to attain any permanent success. For example, in 1845, the first protective union store was organized in Boston. A dozen persons with "the faith of God in their hearts" purchased a box of soap and half a box of tea. From this small beginning grew the New England Protective Union, which rapidly developed into a large organization with four hundred branches. However, dissensions crept into the ranks, and, within a few years, the association was practically non-existent. Similarly, the "Sovereigns of Industry," which like the "Patrons of Husbandry" grew to great proportions, made repeated but unsuccessful attempts to adopt the Rochdale system at its local centers. Finally, the "Knights of Labor" took the field and declared for coöperative institutions. However, little of a definite character was actually accomplished, and the order declined in importance without having permanently advanced the cause of coöperation.

The advantages of consumers' coöperation are quite evident. In the first place, the intermediate trader being eliminated, his gains are deducted from the cost of marketing. By wholesale buying, a member of the coöperating group is able to secure his goods at a reduced price, or to share in a common surplus at the end of the year. Then,

again, through a knowledge of consumers' needs, and, through saving in advertising, the expenses of operation are considerably reduced. It is also apparent that the stores will be managed, not for private gain, but for the good of the community. The store, in its turn, is guaranteed a loyal constituency.

In view of these advantages, it appears surprising that consumers' coöperation has not developed more fully in the United States. However, there seem to be four chief difficulties in the way of its development. First, the country is so large and the interests of the various sections so diverse, that it has not been possible to develop such a general movement as that which exists in Great Britain. Secondly, in the modern American city, retail stores have been organized on a large basis, and a great many of the petty annoyances and short-sighted policies of the old retail system have been eliminated. In the third place, in the retail business in the United States, great private business interests have proved to have advantages in economy far above those possessed by the co-operative business. Finally, American producers are strongly organized, and, in all probability, by limiting production or by refusing to sell goods to such organizations, they would attempt to cripple coöperative undertakings.

Coöperative production is an association of persons for joint production, usually in the field of agriculture or *Coöperative manufacturing.* In this experiment, the co-
production. operating parties furnish their own capital, and the income from the sale of the product is divided among the coöperating producers. In America, various attempts have been made in this direction. For example,

at one time, the "Sovereigns of Industry" had thirty manufacturing establishments with a capital of nearly half a million dollars. The "Knights of Labor" also attempted, with as little success, to organize various productive enterprises, including boot and shoe companies, clothing companies, and tobacco factories. On the other hand, experiments in productive coöperation in creameries have been quite successful. Throughout many agricultural districts there exist such creameries, managed advantageously on a coöperative basis. With this exception, producers' coöperation in the United States can not, as yet, be called successful. The chief reason for this failure may be found in the difficulty of securing capital and good business management for such productive enterprises.

The advocates of coöperation regard it as an unfailing basis for the solution of many problems of American economic life. An impartial analysis of the success of this system in the United States does not seem, however, at present to justify this belief. Perhaps the fundamental difficulty in the way of its successful operation in this country is found in the still prevalent individualistic attitude of Americans towards the problems of economic life. Therefore, with the exception of the success attained in such coöperative enterprises as building and loan associations, assurance societies, and fraternal organizations, together with the successful consumers' coöperation in England and in parts of America, the coöperative system has not furnished sufficient ground for the belief that it will prove an immediate remedy for the permanent improvement of the economic condition of the American worker. If coöperation is to furnish an ade-

**Outlook for
coöpera-
tion.**

quate solution of economic problems in American life, it must first succeed in production ; and there it has generally failed.

QUESTIONS FOR RECITATION

1. What is profit sharing? What is its purpose?
2. Would the wage system be affected by the principle of profit sharing? Explain fully.
3. Explain the different methods of sharing profits. Which is the most successful? Why?
4. What are the objections to the method of sharing profits through participation in stock ownership?
5. Give examples of profit sharing in your own community.
6. Who has the greatest profit-sharing scheme in the United States? What would be the effect of making this plan general in all American industries?
7. What is the outlook for profit sharing in the United States?
8. What is welfare work? Give examples.
9. Do you regard this scheme of social betterment as fundamental? Why?
10. What criticism has sometimes been made of welfare work? Is it true?
11. In what fields is welfare work most highly developed?
12. Explain the most successful form of coöperation in American economic life.
13. Explain consumers' coöperation. Give examples.
14. What is producers' coöperation? Why has it generally failed in the United States?
15. What are some of the differences between the coöperative movement in this country and in England?
16. Discuss the future of the coöperative movement.

PROBLEMS FOR DISCUSSION

1. What has been the success of profit sharing in the United States?
2. What is the attitude of the average employer toward profit sharing? Why?

3. What attitude does the public take toward profit sharing? Why?
4. Do you expect profit sharing to become general in the United States? State reasons.
5. Have you any criticism against the principle of profit sharing?
6. Investigate the systems of welfare work which have been adopted by local employers. What are their strong points? Their weaknesses?
7. If you were managing a department store, what welfare measures would you adopt?
8. What future has welfare work?
9. Can you make any general observations concerning the likenesses of these two experiments? The differences?
10. What are the reasons for the success of coöperation in England?
11. Why has coöperation not been so successful in the United States?
12. What is the strength of the coöperative program? What is its weakness?
13. What steps would be necessary before coöperation could be generally established in the United States?
14. What economic forces led to coöperation among American farmers?
15. What has forced retail grocers into a kind of coöperation?

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CHAPTER XLVI

THE PROGRAM OF LABOR

- I. Nature of unionism
 - 1. Its significance
 - 2. Its national scope
 - 3. Its industrial character
- II. Program of unionism
 - 1. Higher wages
 - 2. Shorter hours :
 - a. American conditions
 - b. The reasons
 - 3. Improved working conditions
- III. Weapons of unionism
 - 1. The trade agreement
 - 2. The strike :
 - a. Its meaning
 - b. Effect on labor
 - c. Effect on employer
 - d. Effect on the public
 - 3. The boycott :
 - a. Its meaning
 - b. Its different forms
 - 4. Outlook for unionism
 - a. The benefits
 - b. The dangers

Nature of Unionism. — Because the modern labor union relies solely upon itself to secure individual prosperity and group welfare, it is labor's most distinctive instrument of social betterment. Its program contemplates no vol-

untary assistance from the employer in the form of sharing his profits, or receiving gratuitous benefits at his hands. Its real significance lies in the fact that it is democratic, not aristocratic, and that it represents a voluntary association of equals striving themselves to improve their own condition. While the union was originally an experiment and, in some respects, is still in the formative period, the movement has grown to such proportions and represents such definite demands that, to-day, it is fast constituting an actual program of economic reform.

Formerly, unions were local and affected only a particular trade. To-day, they are national and embrace representatives of many trades. In the attempt to nationalize the union, the movement was first begun in some one trade, such as that of typographical workers. Gradually, however, it extended to an attempt to organize all the workers of the country. Thus, in 1881, the American Federation of Labor was established, and it has succeeded in affiliating with it the majority of the trade unions of the United States. Its success in this great scheme for the organization of labor is due to the fact that it allows the local unions large powers of control, and requires that only the greater questions be referred to the officers of the Federation.

A union which was composed of the workers of one trade, like that of carpenters or bricklayers, was at first called a "trade union." Two great changes that took place in the last quarter of the nineteenth century have, however, made this term misrepresentative of present conditions. In the first place, through division of labor and specialization in industry, trades

have been so split up that they no longer exist in their old forms. A man is no longer a cabinetmaker, but a "gluer," or a "lathe man." Then, again, the influx of large numbers of immigrants and the growth of a large class of common labor have made it necessary for the trade union, if it would succeed, to take into its membership men who are not highly skilled in any special trade. For example, the union of the United Mine Workers of America includes miners, door tenders, laborers, drivers, trackmen, and other kinds of common labor. Thus the old "trade" union has been transformed into the modern "labor" union with a distinctly industrial character.

Program of Unionism.—At the present time, the demands of unionism are so clearly formulated that they may well be termed a definite program. The union's activities are directed chiefly toward the attainment of three ends: (1) higher wages, (2) shorter hours, and (3) better working conditions. It is also true that the union sometimes attempts to raise the level of intelligence among its members, and to awaken in them a realizing sense of their responsibilities. However, the chief emphasis of the union is laid upon higher wages and shorter hours of work. The effect of the organization of labor upon wages has already been discussed in the chapter on the Theory of Wages. It was there seen that, through organization, labor is able to develop strong monopoly power. Armed with this power of group monopoly, labor can, through the union, make its demands upon the employer and, by securing higher wages, better its condition. The union, through its monopoly power, is attempting to secure a larger share of the product of industry, and in many cases, as in the building trades, has met with marked suc-

Higher
wages.

cess. In this direction, the work of the union is becoming most effective.

Next in importance to the cause of labor is the demand of the union for shorter hours of work. This has been crystallized into the eight-hour-a-day slogan, which in some countries, especially Australia, has accomplished notable results. However, for many workers in the United States ten hours still constitute a working day, although a number of industries are conducted on an eight-hour basis. Saturday half-holidays are the rule in most of the cities, and it is becoming more and more common to give short summer vacations. In the United States it is generally conceded that the legislatures have the right to regulate the working hours of children, and numerous state laws have been passed accordingly. In the case of women, the Supreme Court has decided that the length of their working day may be regulated on the ground of woman's physical inferiority. The labor of men cannot be so easily regulated, unless it can be definitely shown that the health and morals of the community are endangered by the long continuance of such labor.

The reasons for this demand of labor for shorter hours are threefold. In the first place, in normal times there is no longer any great necessity for long hours of continuous work. In former days, when living was precarious, such a necessity did exist, and the tradition that life could not be maintained without hard and continuous work gradually grew up. To-day, rightly or wrongly, labor is struggling to break down this tradition. Again, with a legitimate amount of spare time, it is possible for men to do greater and more effective work. Shorter

Shorter
hours:

American
conditions.

The reasons.

hours mean higher efficiency. Finally, the wide use of machinery in industry has not only made the output of goods greater, but has also caused labor to become more monotonous and nerve racking. As a relief from this monotony and strain, labor demands more time for improved health and social betterment.

While higher wages and shorter hours result in immediate advantages to labor, it is also important that the general conditions under which labor works should be improved. For this reason, the union makes every attempt to better the working conditions and the surroundings of labor. Through the efforts of the union, aided by philanthropists and social workers, legislatures have enacted many laws against child labor, sweatshops, dangerous working conditions, and other industrial abuses. This legislation has proved of benefit, not only to labor, but to the whole community. While, therefore, the main object of unionism has been to improve the working conditions of members of its own group, its benefits have frequently been enjoyed by labor in general.

Weapons of Unionism. — What instruments does the union employ to carry out this program of higher wages, shorter hours, and better working conditions? As a rule, there are three powerful weapons in the hands of organized labor which it may use to accomplish its purpose: (1) the trade agreement, (2) the strike, and (3) the boycott. The trade agreement, as the name signifies, is simply an agreement in a given trade, or group of allied trades, between the employer and the workers. The employer on his side makes a bargain with a committee representing the workmen on their side. The trade agreement is thus a "collective bargain," and the great majority

of industries in which unions exist are conducted under such collective bargaining. Of course, the success and effectiveness of this agreement depend largely on a solid body of union workers. For this reason, the union naturally desires a "closed shop," that is, an establishment in which only organized labor is employed. On the other hand, the employer may prefer an "open shop," in order that he may have more freedom of choice in the employment of labor.

When unavoidable friction occurs between the employer and the workers concerning the terms of a trade agreement, or some equally important matter, the union **The strike:** attempts to enforce its demand by means of the *Meaning.* strike. The strike is an organized cessation of work initiated by the employees for the purpose of securing their terms, or of resisting those of the employer. It is a revolutionary measure and can be justified only by some most unusual condition of affairs. Because of its deep and widespread consequences, this weapon should never be employed by the union except as an absolutely final resort to secure just demands.

The effects of the strike are threefold. In the first place it affects the worker. By means of it, he may be able to force the employer to grant higher wages, or *Effect on* shorter hours, or better working conditions. On *labor.* the other hand, the strike may prove a calamity to the average worker. Wages stop at once, and, while the union men may be supplied with strike benefits, these are often inadequate to meet the demands of family life. Then, again, when work is resumed, oftentimes the leaders of a strike, and sometimes the strikers themselves, are not reinstated by the employer. If these men live in a small

town, depending upon one or two industries, their position becomes quite precarious. Altogether, the strike offers to labor a very uncertain remedy.

To the employer, the strike involves serious consequences. Of course, it is true that, should he win the strike, he would secure more absolute control over his business and be able to decrease wages, lengthen hours, and impose his own working conditions. On the other hand, the enforced idleness of his plant entails great financial loss. In addition to this, much property may be destroyed by violence. Again, if he loses the strike, the extra expense entailed by such losses seriously handicaps the employer in resuming his business operations. For these reasons, the employer is opposed to strikes.

Finally, strikes seriously affect the public; and, because of this fact, it is generally agreed that the public should be the final arbiter of disputes between labor and capital. A strike curtails production. The public, therefore, will have less to consume during the ensuing period. Then, too, as is the case in nearly all great conflicts between labor and capital, a strike is often followed by an increase in prices which falls heavily upon the public. The strike also seriously menaces social welfare through destruction of property and violation of law.

In addition to the trade agreement and the strike, the union possesses still another weapon — the boycott. This is simply an organized refusal on the part of a group of persons to buy goods from another person, or group of persons. It may be used by opposing business houses, but it is chiefly the weapon of the worker and of the public. It has several distinct forms, some of which may be legally employed; but the courts,

*Effect on
employer.*

*Effect
on public.*

*The boy-
cott:
Meaning.*

through injunctions, have sometimes prevented the use of the boycott in its worst forms.

In the simple boycott, a group of persons, who have been working for a certain employer, peacefully refuse to buy his products. In the compound boycott, the workmen directly interested in injuring the boycotted company refuse to deal with those who decline to join in the boycott. This form of boycott has been regarded as a conspiracy and declared illegal. The third form of boycott is negative in character and is known as the "fair list," or "white list." In the first case, the union periodical publishes a list of firms described as "fair" because they work under union hours, pay union wages, and employ union men. In the second case, the Consumers' League publishes a list of firms described as "white" because they do not violate factory laws or other rules agreed upon. The fourth form of boycott is the "unfair list," or, as it has been called, the "we don't patronize" list. In this case, the labor periodical actually publishes the names of firms that do not provide fair conditions for their employees, and thus urges the public not to purchase their goods. The Supreme Court has, in certain cases, prohibited the use of this form of the boycott. It may be said, however, that as a result of the Clayton Act of 1914, the court may perhaps revise its former decisions on this subject.

Armed with the strike and the boycott, and using the collective bargain to secure its end, modern unionism has made innumerable attempts to raise wages and to bring about better working conditions. The success attending both these efforts has been widespread. However, because of the rise in prices, the advance in wages has often been more apparent

Its different forms.

Outlook for unionism:
The benefits.

than real. On the other hand, an actual and permanent gain, in the form of shorter hours and improved working conditions, has resulted from union activities. Another beneficial effect of labor unions is found in their educational activities. The debates and discussions of the union stimulate mental activity, and offer opportunities of social culture and advancement. Furthermore, labor unions often help the worker in time of sickness and distress, providing relief in case of accident, death, or unemployment. Finally, the greatest benefit of modern unionism is to be found in its effect upon the standard of living of workingmen. The steady advance in the standard of living enjoyed by American laborers is almost altogether traceable to the powerful influence of unionism in securing a higher wage, and in maintaining that wage when once secured.

On the other hand, the program of labor is not without its dangers. The union is frequently charged with reducing the level of group efficiency to that of its *The dangers.* least efficient worker. Furthermore, there is no doubt whatever that labor unions sometimes limit output and thereby curtail production. In unusual times, like the period of the World War, this decreased production constitutes a serious social menace. Under such circumstances, partly because of this limited output, abnormally high prices prevail, the burden of which falls upon the general public. Through labor unions, class antagonisms may also be engendered, and the solidarity necessary to true national greatness may be jeopardized. The labor agitator and demagogue may do untold harm to society by widening the breach between labor and capital. Of this character is the agitation of such labor organizations

as the Industrial Workers of the World, which openly preaches class war, direct action, and the destruction of private property. No condemnation can be too severe for this kind of radical labor organization. Labor must be amenable to the laws of social justice, for its alliance with radicalism will result in its own destruction. The cause of true unionism suffers, also, when labor organizations are unfair in their demands, and threaten to accomplish their ends through anti-social action. Whatever may be the consequences to labor, the rights of the public must be protected. Labor, no more than capital, may be allowed to wield unjust monopoly power.

QUESTIONS FOR RECITATION

1. How does the program of labor differ from the idea of profit sharing? Which is the more democratic? Why?
2. Describe how the trade union developed into the labor union. Through what organization was this accomplished? Why is it so successful?
3. What industrial changes made necessary the evolution of the trade union into the labor union?
4. What are the definite demands of the labor union? Are they all equally important?
5. Why can industrial workers secure higher wages through the union than by individual action?
6. Is the eight-hour demand any more reasonable now than it was a hundred years ago? Why?
7. In the United States, what legal difficulties are sometimes encountered in the attempt to regulate hours of labor?
8. What has the union accomplished in the way of improved working conditions?
9. What is the "trade agreement"? How is it arrived at?
10. What is the difference between the "closed shop" and the "open shop"? Which do you advocate? Why?
11. Define a strike. Discuss its threefold effects.

12. Give some examples of great strikes, with their consequences.
13. What is a boycott? Give an example with which you are familiar.
14. Distinguish between the simple and secondary boycott.
15. What is the difference between the "fair list" and the "un-fair list"? Which has been declared illegal?
16. How may the Clayton Anti-trust Act of 1914 affect the activities of labor unions?
17. Summarize the advantages of labor unions. Which is the greatest?
18. Do you support everything that unionism permits? Why not?
19. Would you permit labor to do things you would not permit capital to do? Explain.
20. Outline the chief dangers or evils that may accompany unbridled unionism.

PROBLEMS FOR DISCUSSION

1. Discuss the value of collective bargaining to the labor union.
2. How much justice is there behind the collective bargain?
3. Discuss the economic basis for the eight-hour day.
4. Discuss the effect of an eight-hour day on the quality and quantity of the output.
5. What is the effect of pace setting on the product?
6. Why do men strike? Discuss its justifiability.
7. Is the "strike" spirit a good one for the community? Why not?
8. Can the "strike" spirit be eliminated? How?
9. Discuss the Danbury Hatters' Case.
10. Is the "boycott" spirit a good one? Why not?
11. If you were a wageworker, would you feel that your interests and those of your employer were essentially opposed? State reasons.
12. Under what circumstances might unions be of advantage to employers as well as to employees?
13. Should union activity be permitted to interfere with industry? Why not?

14. What would be the significance of the entrance of the union into politics?
15. Discuss the idea of compulsory arbitration.
16. Should railroad employees be permitted to strike?
17. Has the public any rights in conflicts between labor and capital?
18. What is a "lockout"?
19. How may labor participate in the management of industry?

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CHAPTER XLVII

THE PROGRAM OF REGULATION

- I. Development of regulation
 1. The individualistic attitude
 2. The social attitude :
 - a.* Necessity for regulation
 - b.* The modern test
 - c.* The government's duty
- II. Regulation through police power
 1. Its meaning
 2. Its application :
 - a.* Hours of work :
 - (1) Of women and children
 - (2) Of adult males
 - b.* Sanitation :
 - (1) Of factories
 - (2) Of houses
 - c.* Food inspection
- III. Regulation of prices
 1. Principle of "cost price" :
 - a.* Its meaning
 - b.* Its requisite
 2. Examples of regulation :
 - a.* Control of labor
 - b.* Revision of tariff
 - c.* Control of trusts
 - d.* Price regulation
 3. The outlook

Development of Regulation.—The western world of the latter eighteenth and early nineteenth centuries was

dominated by the idea of individual freedom. In philosophy, legislation, industry, religion — everywhere — the spirit of democracy had taken hold upon the people. This democracy, however, was essentially different from democracy as it is thought of at the present time. The individual then, as now, was the factor of primary interest in social progress. Yet individual welfare, according to the view prevailing at that time, was to be secured through individual freedom. The policy of *laissez faire* — “let alone” — was rigorously enforced, so that any activity of the individual was justified, provided it did not interfere too seriously with the welfare of the remaining members of society.

The individualistic attitude.

The opening years of the twentieth century still reveal the presence of the spirit of democracy, but in an essentially different form. The eighteenth and nineteenth century democracy commanded the government to leave the individual practically free to do as he pleased. But more than a hundred years of this individual freedom have shown, to the satisfaction of a great majority, that the eighteenth century *laissez-faire* philosophy often resulted in much evil. Society is not always justified in letting the individual take his course; because, if an individual has anti-social ideas and is left free to do as he pleases, society must suffer from his unrestricted freedom. The industrial monopolist believes that he should be “let alone,” but, from this point of view, society does not agree with him. He is dependent upon society for his power, and, like any trustee, must give an account of his stewardship.

The social attitude:
Necessity for regulation.

Thus, in the first half of the twentieth century, men are measuring proposed actions by the test of social welfare.

The question which is raised is not merely one of individual right, but of social justice. Does a man wish to conduct his business in a certain way? What will be the effect of his act upon society? If it be harmful to the community, society is coming to the view that such action should be forbidden, or limited by social restraints. For example, when woman first entered industry, the employer imposed long hours of labor and improper working conditions upon her. When society realized that the effect of such action was detrimental to social welfare, it demanded that the employer's conduct in this direction be subject to restrictions designed for the good of the community. According to this view, social welfare becomes the test of individual action.

Under this spirit of social control the program of government regulation has developed with surprising rapidity. Jefferson, more than a century ago, said, "That government is best which governs least." Now, however, it is regarded as government's duty to regulate the limits beyond which the individual may not pass and remain free from social punishment. Proceeding on this principle, society regulates rates, inspects factories, requires fire escapes, and, in various other directions, controls freedom of individual action.

Regulation through Police Power. — The first attempts at general regulation by the government were made through its "police power." By police power is meant the authority of the state to regulate individual action for the general good. Of course, government must protect its citizens. Men must not be wantonly murdered; property must not be unjustly appropriated; the public peace must not be unnecessarily disturbed. The activities

of government in these directions are, therefore, a natural part of the sovereignty of the state. But government may also exercise, in other directions, its power to protect, not only the safety, but also the health and morals of the community.

In pursuance of this legal doctrine, we have seen that the work of women and children has been so regulated that their health and safety are conserved. For example, it is unlawful to employ children under a certain age in a factory, because social welfare demands that children shall have a minimum of education before taking up the tasks of life. Women, too, are forbidden to work more than a certain number of hours per week; and employers are compelled to provide specified sanitary conveniences, because the courts have ruled that the health, safety, and morals of society depend upon these regulations. For example, Congress has enacted a law limiting the hours of labor for women working in factories, hotels, and shops in the District of Columbia to eight hours a day; the legislature of Ohio has passed a law, which has been upheld by the Supreme Court of the United States, limiting the hours of labor for women employed in certain industries to ten hours a day; and the state of Oregon has enacted a statute, likewise declared constitutional, providing for an Industrial Welfare Commission to fix hours of labor, minimum wages, and conditions of labor for working women.

Its appli-
cation:
*Hours
of work.*

In America, legislation concerning working conditions has confined itself, until recently, to the passage of such laws regulating the labor of children, the hours and working conditions for women, and the safety of workers. Under the American system of government, the adult male worker

has sometimes been denied legislative protection on the ground that he is free to contract as he pleases. After a laborer once chooses to work in a dangerous or unhealthful trade, the court has frequently held that he takes upon himself the responsibility for any danger that may attach to the trade. Again, the court has declared that a man's labor is his own, and that it would be an infringement upon his personal liberty to limit his hours of work. Furthermore, the advocate of freedom of contract has relied upon the constitutional restriction that no person shall be deprived of life, liberty, or property without due process of law. For all these reasons, it has been extremely difficult to secure legislation limiting the hours of labor for workingmen. Nevertheless, some progress has been made in this direction. For example, the Supreme Court has declared constitutional a Utah law prohibiting miners from working more than eight hours a day, although it has declared unconstitutional a New York law prohibiting bakers from working more than ten hours a day. A great advance, however, was made in 1917, when the Supreme Court of the United States declared constitutional Oregon's law fixing a ten-hour day for workingmen in manufacturing establishments. Other states have also passed laws limiting hours of labor in such manufacturing concerns as smelting plants, plaster and cement mills, plate glass works, rolling mills, irrigation works, sawmills, cotton and woolen mills, and similar establishments. Among the measures taken to protect adult male workers should also be mentioned the various State Workmen's Compensation Acts, as well as the Federal Employers' Liability Act of 1908.

In recent years, the police power has been widely exercised in the regulation of sanitation. It is but a generation

since houses and factories were constructed in any way that would suit the convenience or whim of the builder. Recent scientific investigations, which have made known the effects of bad air and lack of necessary sanitary conveniences upon workers in factories, have led to factory legislation aimed directly at the evil of insanitation. While these measures have not in all cases been enforced, they exist on the statute books as an indication of legislative opinion on the subject of public health. *Sanitation.*

Attempts have likewise been made to improve the sanitation of houses. Formerly it was generally believed that a man's house was his castle; that men had a right to privacy and freedom at home; and that the conditions there surrounding their lives were a matter of indifference to the public at large. The reverse of this attitude is seen in the modern treatment of disease. In a densely settled neighborhood it is a matter of much more than individual concern that a man has smallpox. Therefore, particularly in newer cities, many efforts in the form of city planning have been made to improve living conditions. The size, air space, sanitation, and construction of houses are becoming subject to strict regulation because of their effect upon individual and social welfare.

Another field in which regulation has become especially necessary is in connection with food adulteration. Society is often menaced by the evils of adulteration and falsification of goods, which sometimes threaten the very life and health of the community. The United States has been slow to abandon the doctrine of *laissez faire* — or non-interference — in the domain of food and ware inspection. However, a beginning has been made in this direction through the passage of the Federal Pure Food *Food inspection.*

and Drugs Act, which aims to check effectively the adulteration of food and drink. Before the passage of this act, food adulteration was widespread; but, with its passage, a gradual change is being effected in the attitude of the manufacturer regarding his duty to the public.

Regulation of Prices. — Another form of government regulation is the attempt, championed by Professor Clark of Columbia University, to secure "cost price." "Cost price": A "cost price" is a price equivalent to the cost of production plus a reasonable gain to the producer. *Its meaning.* Therefore, according to this view, in the fixing of cost price no element of monopoly power or special privilege should enter. Cost prices, Professor Clark maintains, are just prices. Accordingly, social justice demands that the consumer be given the benefit of modern discovery and inventions, so that, when a device is perfected which lowers the cost of production, the price of the commodity in question may be proportionately reduced.

Cost prices depend, therefore, upon free competition. We have seen that, as a matter of fact, prices are to-day often determined by monopoly power. *Its requisite.* Consequently, these two forces — competition and monopoly — come into conflict. Both cannot exist at the same time. If competition is to be restored and cost prices established, monopoly power must be regulated. That is to say, whenever monopoly power attempts to fix prices, the government must interfere in an attempt to reestablish conditions of competition. The regulation of monopoly power becomes a requisite to the principle of cost price.

Proceeding on this basis, the advocates of this doctrine desire to regulate all forms of monopoly so that cost prices

may be assured. If, for example, labor, through its monopoly power of organization, fixes too high a price for its services, it must be subjected to government regulation. No exception is to be made in its favor. When the union uses its weapons so effectively that it develops into a monopoly organization, it destroys that free competition upon which the adherents of this school believe the price of labor should depend. The program of regulation, therefore, includes labor within its sphere of activity. It may readily be seen that this program is directly opposed to the teachings of those who advocate the development of unrestrained monopoly power on the part of labor.

*Examples of regulation:
Control of labor.*

In the same way, the manufacturer must not be allowed to profit by special privilege. Whenever an unfair advantage has been given him by reason of undue protection against foreign competition, the government must revise its former act. There is little doubt that prices have been artificially raised by means of special privilege accorded the manufacturer through protective legislation. These prices are certainly not cost prices. Therefore, to restore the latter, the government must revise tariff acts and regulate the business of the manufacturer.

Revision of tariff.

This principle of government regulation has, however, as we have already seen, been chiefly applied to the control of great combinations of capital in the form of trusts and railroads. Enough has been said in previous chapters to indicate the character of these laws, and their desired effects. It is only necessary at this point to call attention to the fact that they are the most representative American attempt to apply the program of govern-

Control of trusts.

ment regulation to the affairs of society. Whether this program is completely practicable will, in large measure, be determined by the ultimate effect of railroad and trust legislation. Thus far, both groups of legislation are in a formative stage, and the future is still in doubt.

Since the American entrepreneur, through the non-interference doctrine of the early nineteenth century, naturally developed into a monopolist, it has become increasingly necessary for the community to exercise some effective restraint upon the exercise of his monopoly power. How is this to be accomplished? During the period of the World War, Americans received their first extensive training in general price regulation. Commissions were appointed (with power to regulate the prices of wheat, sugar, and coal) which developed an administrative machinery previously unknown to the American people. It may be that, with the experience thus acquired, America may in this spirit approach the problem of the control of monopoly power. Already, the existence of the Interstate Commerce Commission, the Federal Trade Commission, and the various Public Service Commissions of the Commonwealths, furnishes a nucleus for the development of such price-fixing commissions. It must be remembered, however, that such a policy is fraught with danger when administered in opposition to natural economic laws.

In conclusion, we may say that the program of government regulation is likely to succeed (1) if the police power of the state is developed into an effective instrument for the protection of the worker, (2) if competition is restored, or monopoly power is effectively checked, and (3) if adequate instrumentalities are developed for representing and conserving social welfare. Through a

*Price
regulation.*

The outlook.

progressive interpretation of protective legislation by the judicial organs of government, the first requisite may be accomplished. While it is doubtful whether American society will ever return to a pure régime of free competition, it is not impossible for the benefits of monopoly, through public control and regulation, to be enjoyed by the community. Finally, the present development of industrial bodies and welfare commissions seems to indicate a growing desire on the part of the public to solve industrial problems in accordance with the principle of social welfare.

QUESTIONS FOR RECITATION

1. Explain the policy of *laissez faire*. Is it still advocated?
2. Why has regulation of industry become necessary? Give examples.
3. How should we measure individual actions to-day? Why?
4. Define the police power. Give examples of its exercise.
5. Why is it easier to regulate the working conditions of women and children than those of men?
6. What laws have actually been passed for the protection of women and children in industry?
7. What are the chief legal obstacles in the way of regulating the labor of men?
8. What laws have actually been passed for limiting the hours of labor of workingmen?
9. Explain the work accomplished, through government regulation, in the matter of sanitation.
10. What is the government — both state and national — doing to secure pure food and honest goods?
11. What is "cost price"? How may it be secured?
12. What must be regulated to insure cost prices? Why?
13. Who would naturally oppose the idea of cost prices? Why?
14. Apply the program of government regulation to labor.
15. What do the Sherman and Clayton Anti-trust Acts attempt to do?

16. How could prices be regulated by the government? Do you approve of this policy?

PROBLEMS FOR DISCUSSION

1. Discuss the advantages and disadvantages of individualism.
2. Is there any rule for determining the limits of state interference with individual liberty?
3. In what way does the exercise of police power justify government regulation of industry?
4. Explain carefully under what circumstances a legal eight-hour day might be justified under the police power.
5. Is a cost price necessarily a just price? Defend your position.
6. What is the attitude of the government regulationist toward a tariff on wool? On antiques?
7. What control would the government regulationists exercise over capitalistic combinations? Why?
8. Would an advocate of this program have the state fix rents? Why not?
9. Discuss the effect of this program on the monopoly profits of entrepreneurs.
10. Discuss the dangers of price-fixing.
11. Contrast Jefferson's idea of government with the twentieth-century idea.
12. What is the attitude of the governmental regulationist toward monopoly? Toward competition?
13. What distinction has the Supreme Court made between the regulation of interstate commerce and internal manufacturing?
14. What is the Federal Employers' Liability Act? Why are Liability Acts being superseded by Workmen's Compensation Acts?
15. Describe some of the more important activities of the Federal government during the World War period. Did these constitute a fair demonstration of the program of regulation?
16. Discuss the possibilities of the program of government regulation. Is it likely to succeed?

SUPPLEMENTARY READING

- Andrews, I. *Minimum Wage Legislation.*
Clark, J. B. and J. M. *The Control of Trusts.*
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Ely, R. T. *Monopolies and Trusts.*
Federal Trade Commission. *Annual and Special Reports.*
Frankfurter, F., and Goldmark, J. *The Case for the Shorter Work Day* (2 vols.).
Hutchins, B. L., and Harrison, A. *A History of Factory Legislation.*
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CHAPTER XLVIII

PROGRAMS OF NATIONALIZATION

I. The Single Tax

1. Its object
2. Its meaning
3. Its alleged advantages :
 - a. Prevents land speculation
 - b. Simplifies taxation
 - c. Increases production
 - d. Relieves poverty
4. Its attempted justification :
 - a. Land different from other property
 - b. Land values largely social values
5. Its limitations
6. Its outlook

II. Socialism

1. Its distinctive character
2. Its recent growth
3. Its chief criticisms of society :
 - a. Exploitation of labor
 - b. Growth of private monopoly
 - c. Waste of effort
 - d. Evils of competition
 - e. Lack of justice
4. Its leading principles :
 - a. Government ownership advocated
 - b. Private property opposed
5. Its evils
6. Its future
7. Other radical doctrines

Two other programs of economic reform depend for their success upon the action and support of government. Both of these may be described as programs of nationalization. In the one, the aid of government is invoked in order that society as a whole, rather than particular individuals, may enjoy the benefits of the increased valuation of land resulting from social action. In the other, government is relied upon to bring about not only the nationalization of land, — natural resources, — but also of capital, — the tools of production. The one is known as the Single Tax Theory; the other, as Socialism.

The Single Tax. — In his "Progress and Poverty," Henry George asks this question, "Why, in spite of the increase in productive power, do wages tend to a minimum which will give but a bare living?" Starting out with this query, George explains the coexistence of progress and poverty on the ground that the land-^{Its object.}lord class has appropriated, as rent, a great mass of wealth that should go to labor as wages, or to society as social income. He shows that the great increase in land values due to the growth of population (as evidenced by the fact that Manhattan Island alone in three hundred years increased in value one hundred million times) has gone, not to the people who created it, but has been appropriated, through the absorption of economic rent, by a few landlords in the form of an "unearned increment." Therefore, to restore this "unearned increment" to society, and thus to do away with the poverty of the masses, Henry George proposed that economic rent be confiscated by means of a single tax on the value of land. This plan is now universally known as the Single Tax Theory.

The Single Tax, to use Henry George's own words, is

“one single tax levied on the value of land irrespective of the value of improvements, in or on it.” All machinery of taxation would be done away with, except that necessary to assess and tax land values. Hence the name “Single Tax.” Now it must be distinctly borne in mind that this Single Tax means a tax on land itself, — not on any of its buildings or improvements. The tax is aimed solely at land values, and is thus an attempt to socialize the value of the land by turning over to the people its economic rent which has been termed an “unearned increment.”

The advantages claimed for the Single Tax are, first, that while such a tax would be so high as to cover the full value of the bare land, it would not apply at all to the value of improvements upon land. Since these improvements would remain untaxed, there would be every inducement to make them. At the same time, since land itself would be taxed to its full value, it is argued that there would be no inducement for land speculation. Nothing whatever would be gained by holding idle land. In this manner, while every encouragement would be offered land improvement, an effective blow would be given to land speculation. Our present system of taxation is said to encourage land speculation by taxing unimproved land at a lower rate than improved land.

Another advantage claimed for the Single Tax is its simplifying effect upon the mechanism of taxation. The present land tax would be retained, but the intricate system of internal revenue, tariff collection, and income taxation would be abolished, and a great saving in the collection of taxes effected. The basis of taxation would be completely shifted from the value of

buildings, tools, machinery, and all processes and products of industry to the rental value of lots and lands. Furthermore, there would be no chance to escape land taxation. Personal property may be concealed. Land, however, cannot be hidden from the assessor.

In the third place, it is claimed that the Single Tax would increase the productive capacity of the community. Henry George believed that, of the three factors of *Increases production.* production, land was monopolized chiefly. The Single Tax attempts to undermine this monopoly of land (1) by removing all taxes from labor and its products, and (2) by concentrating all taxation in a single tax on the value of land. It is therefore predicted that this substitution would take away any inducement for holding idle land. No one would desire "to corner" land for a "rise" in future value. Hence the land would be released for purposes of production. This substitution of the tax on land for taxes on industry would, it is claimed, free the active elements of production — labor and capital. At the same time, this substitution would bring into use more land than is now available for productive purposes.

Finally, advocates of the Single Tax assert that it will relieve poverty by taking the "unearned increment" from the landlord and restoring it to society. In *Relieves poverty.* other words, wages will be increased through appropriation of rent. Hence the income of the masses will be enlarged at the expense of that of the landlords. Henry George firmly believed that the private appropriation of land values resulted in poverty, disease, and crime. He was absolutely convinced that exclusive taxation of land values would be followed by increased general prosperity and social welfare. Then, too, since the Single Tax

would fall most heavily on the cities where land values are greatest, the poorer agricultural districts would enjoy more general prosperity by being relieved of the burden of excessive taxation.

The advocates of the Single Tax argue, moreover, that it is just, because they do not regard land like ordinary private property. As the earth was not made by man, but merely supplies a temporary dwelling place for generations of mankind, the men born into the world have an equal right to the free gifts of nature. Therefore, they assert, the natural resources of a nation should be used for the benefit of the entire nation; and this condition of affairs can only be brought about by shifting the burden of taxation from the majority, who do not hold land, to the minority who do. Single Taxers believe that a tax laid on tools or any other creation of human labor violates a right of property, because it takes from the man who has created it part of the thing which he has made. They maintain that the tax on land values, however, takes from individuals nothing that they have actually created.

Again, assert the Single Taxers, the value of land is not due to the work of man and, therefore, its value bears no relation to actual individual effort. For example, the value which is created in the land as the result of the centralization of business in New York City is appropriated by a few individual land-owners. This, maintain the Single Taxers, is unfair because they did not create the value of Manhattan Island, nor are they alone responsible for increasing it. This socially created value, they assert, should be used for the purpose of developing certain community interests. With

Its justification:

Land different from property.

Land values social values.

these properly secured and safeguarded, poverty would be at a minimum by reason of a more equal distribution of social income.

It is highly improbable that the Single Tax would accomplish all that its advocates claim. While the sincerity of their belief is undeniable, and the inspirational work of their leader compelling, the fact remains Its limitations. that poverty is not due alone to the private appropriation of rent from land. As a matter of fact, although rent has risen in the United States for the last century, wages have also risen because the sum total of social income has increased. The causes of poverty are so multitudinous that no one remedy can be found for its cure. While the Single Tax might somewhat relieve poverty, it certainly would not abolish it, or result in the establishment of complete and universal democracy. Assuredly, no thinking person can believe that the Single Tax would prove a panacea for all social ills. Furthermore, the justice of compelling one factor of production to bear all the burden of taxation is open to question. In a true democracy, capital and also labor should bear a fair, but proportionate, share of this burden.

Whether the amount derived from land taxation alone would be sufficient to meet all the expenses of government is also a matter of legitimate dispute. However, Its outlook. the present system of taxation is unquestionably imperfect. Therefore, the principle of the Single Tax would doubtless offer a solution for some of the chief evils of the present fiscal system. This principle has already been applied in New Zealand, Vancouver, and, in a somewhat modified form, in England and parts of Germany. As a program it has never been afforded a really extensive

opportunity to demonstrate its effectiveness. However, present indications point to a time in the near future when some of our American States, as well as several of the more progressive European countries, will be seriously remodeling their taxing systems on the basis of the Single Tax Theory. But the tremendous financial burdens imposed upon civilization by the World War may make it necessary to expand the Single Tax into a "Triple Tax" on land, income, and inheritance.

Socialism. — While the Single Taxers hold to the socialization of natural resources as a means of securing social progress, another school of reformers — the Socialists — hold that, in order to attain social justice, not only natural resources but also capital must be nationalized. While production would thus become socialized through the collective ownership of the tools of production, distribution would also become more or less nationalized through the appropriation of interest and profits, as well as rent, and through the consequent enlargement of labor's share of the social income. Thus the Socialist asserts the right of labor to the full product of industry.

The recent growth of Socialism is one of the important phenomena of modern times. In several European countries its growth has been so rapid that many believe it will eventually become a firmly established institution. Rapid progress in this direction has already been made in Germany, Italy, Austria, France, and Belgium. In 1912, the socialist vote in Germany numbered over 4,250,000; while in France, in 1914, it approximated 1,400,000. The social unrest following the World War served still further to increase not only the number of

Its distinctive character.

Its recent growth.

Socialists, but also the number of still more revolutionary Radicals. In the United States, although Socialism has attracted to its ranks several hundreds of thousands of voters, the movement has not made such rapid strides as in European countries. The more stable and favorable economic condition of the masses has caused this movement to manifest itself chiefly in the extremes of American society. The kind of Socialism here advocated is largely a mixture of "Utopian" ideas with "Marxian" theories.

The objections which Socialism makes to the present order of society seem to group themselves under five headings. First, there is the belief in the uni-
 versality of exploitation. Exploitation means that an individual receives less than he produces. According to the Socialist's use of the term, a day laborer, creating in a year so many hundreds of dollars' worth of value and receiving only half of this in wages, is being exploited by the capitalist to the amount of value retained. In the eyes of the Socialist, exploitation is an inevitable result of a system which permits the private ownership of the tools of production and the control of capital in such a manner that the owner of the machine becomes the master. He argues that it is to the interest of the tool owner to get the tool user to work at the lowest possible wage; hence exploitation eventually results.

*Its criticisms:
Exploitation of labor.*

The second criticism which the Socialist urges against the present system is that it permits the growth of private monopolies and offers no effective way to check them. Many fabulous fortunes, he asserts, have been made through the monopoly control of articles of consumption, — coal, meat, ice, and iron; or through the ownership of monopoly business, — street-car

Growth of private monopoly.

lines, telephone, railroad, gas, and water supply companies. The Socialist believes that it is hopeless, and furthermore undesirable, to endeavor to restore competition as a regulator of prices. As competition gives way to combination, so he believes state monopoly must succeed private monopoly.

The third criticism which the Socialist urges against modern society is its wastefulness. Competition is un-
Waste of effort. economic; coöperation, economic. Under the competitive system much is done in duplicate, and triplicate, that could just as well, under a system of coöperation, be done but once. This, he asserts, is particularly true in the distribution of goods for consumption. A half dozen competing hucksters, milkmen, and icemen pass over the same route daily, when half that number might have distributed the same amount of goods had there been no competition.

Hence, another criticism of the Socialist is against the essentially evil nature of competition. In industrial com-
Evils of competition. petition he sees a force that calls out all the bad in human nature, while at the same time it suppresses much that is good. He charges, that, to undersell their competitors and make a profit, men adulterate food, employ child labor, violate factory inspection laws, and pay low wages. Competition, he persistently maintains, puts the law-abiding and humane employer at a disadvantage and forces the indifferent employer over into the camp of those who seek success at any price.

Finally, the Socialist criticizes the present industrial order on the ground that it does not meet the demands
Lack of justice. of social justice. He sees in the present system no orderly plan for constructive development, or for distributive justice. On the side of production, he

points out the phenomenon of poverty, the lack of employment, and the absence of equal opportunity. He regards labor as the sole creator of wealth, but sees land and capital, the passive factors of production, receiving a large part of the total product of industry. Hence, from the standpoint of distribution, he argues that distributive justice can be secured only when the right of labor to the full product is universally recognized. Just how this product is to be divided among the workers, the Socialists, however, are not in complete agreement. Some maintain that it should be distributed according to the principle of equality; others, according to actual needs; and still others, according to individual services.

To remedy these evils that are attributed to the present order of things, Socialism comes forward with an entirely different plan that strikes at the very foundations of our present social system. It proposes to substitute for the private ownership of all land and capital goods, — factories, railroads, stores, and the like, — national ownership and operation. In this plan the Socialist sees many advantages. Under such a system there would be no capitalist to demand interest; all the returns of labor would go to labor; and exploitation would cease. As the government would own all the land and natural resources, there would be no monopolist's profits to be paid out of the pockets of the consumers. Since competition would be destroyed, the Socialist pictures an ideal world in which there would be no further incentive to adulteration of goods, to child labor, or to the violation of health and fire ordinances. Every child would be guaranteed education and support at state expense, and every man in old age, after his life work is over, would be a pensioner of the government.

Its leading principles:
Government ownership advocated.

The Socialist believes that in many ways society has outgrown the institution of private property, just as much as it has outgrown the institution of property in individuals. He admits that both may have been valuable at certain stages in the development of civilization, but asserts that that time is now passed. He attacks the institution of private property, therefore, and advocates the abolition of the private ownership of land and the tools of production. In common with the Single Taxer, the Socialist believes that the land is a free gift of nature, and he would, therefore, socialize it. He goes a step farther than the Single Taxer, however, when he advocates the abolition of private property in capital goods, — factories, railroads, and all direct agencies of production. Capital is to be nationalized in order that the capitalist may be eliminated as a claimant in distribution. The Socialist wars incessantly against the capitalist, whose place is taken in the socialistic régime by the government. However, Socialism permits private ownership in consumption goods; that is, it leaves to individuals the ownership of such articles of consumption as food, housing, and clothing, and sanctions private property in incomes allotted to individuals by state authority.

The predictions of the Socialist are so positive and his optimism so pronounced that one might be led to believe that his plan for social betterment would surely inaugurate the millennium. It is here, however, that the Socialist makes his greatest error of judgment. His optimism for the future is only equaled by his pessimism for the present. He forgets that, under Socialism, since industries would necessarily be organized on a great national scale, the efficiency arising from individual initiative and

*Private
property
opposed.*

Its evils.

responsibility would be lacking. The productive machinery of society would be less efficient; there would be less opportunity for the genius to make his mark in industry; government itself might break down under the weight of its industrial responsibilities. Men and women would still be dishonest, lazy, wasteful, and shiftless under Socialism. Officials would still be corrupt; ambitious men would usurp power; demagogues would secure office; the difficulty of allotting different kinds of labor to different individuals would cause envy and dissatisfaction; the tyranny of the majority would be a menace to free speech and personal liberty. Finally, if incomes were distributed according to the principle of equality, invention and enterprise would be stifled.

To the impartial student, therefore, Socialism does not hold out the salvation of mankind. On the contrary, a critical analysis of Socialism justifies the conclusion that the so-called coöperative common-wealth might prove more unjust and unsatisfactory than the present social order. Its future. Its contribution to American economic life seems to lie in its attitude toward private monopoly. Even here, however, its program is faulty. Only in the field of natural monopolies would the principle of public ownership—should public control fail—prove desirable. It is true that competition gives way to combination where natural monopolies are concerned. Unregulated private monopoly in such industries is, therefore, a menace to social welfare. Hence, government regulation, and *perhaps* eventually public ownership, may offer the most effective solution of this most vexatious problem. It would only be in this field, however, that the socialistic principle would become applicable. Thus agriculture,

manufacturing, and commerce would still be largely open to private enterprise. In America, therefore, the socialistic doctrine seems to offer its greatest field for exploitation in the direction of the public control of natural monopolies. Thus, only indirectly will Socialism accomplish its true purpose. It will serve to liberalize our economic thinking.

In closing this discussion of Socialism it may be well to distinguish it from various other radical doctrines that are often thoughtlessly associated with the idea of Socialism. In popular thought, Socialism and Communism are frequently confused. In fact, beginning with the last half of the nineteenth century, these terms have gradually interchanged meanings. To-day Communism signifies the abolition of private property not only in production goods, as does Socialism, but also in consumption goods, the private ownership of which Socialism permits. Collectivism is a term that is often used synonymously with Socialism. On the other hand, Anarchy is sometimes ignorantly associated with Socialism. As a matter of fact, these two systems are diametrically opposed. While Socialism advocates the widest possible extension of governmental authority, Anarchism preaches the abolition of all government, substituting in its place free voluntary associations. Again, Socialism should be sharply distinguished from Syndicalism. In America, this movement is represented by the Industrial Workers of the World, who advocate the control of industry by the workingmen organized in trade unions or syndicates. After these syndicates have secured control of industry, they would then attempt to secure control of the government. This movement advocates such revolutionary doctrines as

Other
radical
doctrines.

sabotage, the general strike, and the "war of the classes." It is therefore absolutely inimicable to social welfare.

QUESTIONS FOR RECITATION

1. State briefly the difference between the Single Tax and Socialism.
2. What do we mean by nationalization as applied to land? How may it be accomplished?
3. What is the Single Tax? What is its main purpose?
4. What is the meaning of "unearned increment"? How does it arise?
5. Why does the Single Tax exempt improvements on land from taxation?
6. Show how the Single Tax would prevent land speculation; show how it would simplify taxation.
7. Why would the Single Tax increase production? Relieve poverty?
8. How does the Single Taxer justify his doctrine?
9. Do you think the Single Tax may be so justified?
10. What are the limitations of the Single Tax theory?
11. Discuss the outlook for the Single Tax.
12. What is Socialism? What does it emphasize on the side of production? On the side of distribution?
13. Outline the arguments in favor of Socialism; against Socialism.
14. Contrast Socialism and Anarchism.
15. In what European countries has Socialism made most progress? Why?
16. What is meant by "exploitation of labor"? What is the attitude of Socialism toward this doctrine?
17. What is the attitude of Socialism toward private monopoly? Toward free competition?
18. What would Socialism substitute for private monopoly? Why?
19. Would there be any private property under Socialism? To what extent?
20. Explain the evils of Socialism. What might be the fate of a socialistic society?

21. What do you think of the future of Socialism in the United States?

22. What does the Socialist mean by "distributive justice"? How would he secure it?

PROBLEMS FOR DISCUSSION

1. Describe the life of Henry George.

2. What is "the full economic value of land" which Henry George would absorb by a tax?

3. Outline the arguments for and against the Single Tax.

4. What has the Single Tax accomplished as applied in New Zealand?

5. Is there any connection between the Single Tax Theory and the "natural right" doctrine?

6. Explain just exactly how the Single Tax scheme would be administered.

7. Was Marx correct in assuming that labor is the sole cause of value?

8. Discuss the different kinds of Socialism.

9. Why has State Socialism had such a rapid rise in Germany?

10. What are the leading economic doctrines in the platform of the American Socialist party?

11. To what group in the community do the doctrines of Socialism make their strongest appeal? Their weakest appeal?

12. Theoretically, which group in the community would be the chief gainer through Socialism? Why?

13. Is Socialism to be judged by its ideal, or by its probable working? Why?

14. What are the difficulties which you think the coöperative commonwealth would experience?

15. Do you think it possible for a government representing the workers to take over one great industry after another, and to operate these great industries for the common welfare?

16. Does the Socialist urge equal distribution of wealth?

17. What are the forces making for Socialism in the United States to-day? What are the forces militating against Socialism?

18. Why is it not right to say of every public interference in in-

dustry that it is socialistic? When may a measure be called socialistic?

19. Is the idea of equal opportunity characteristic of Socialism only?

20. Explain the meaning of Syndicalism. Where has it developed?

21. Show the evils of this revolutionary doctrine.

22. Why is it absolutely unsuited to American conditions?

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CHAPTER XLIX

ECONOMIC REFORM AND SOCIAL PROGRESS

- I. Justification of progress
 1. What is progress?
 2. Its philosophical basis :
 - a. Influence of environment :
 - (1) The two forces
 - (2) The old fatalism
 - (3) The new optimism
 - b. Belief in natural capacity :
 - (1) The opposite view
 - (2) The present attitude
- II. Requisites of progress
 1. The ideals :
 - a. Opportunity
 - b. Social adjustment
 - c. Efficiency in education
 - d. Leisure
 - e. Recreation
 - f. Health
 2. The method

At first glance the various experiments and programs for individual and social betterment seem to have little in common. From the benevolent attempts of the employer to improve the condition of the worker to the insistent demands of the Socialist for the national ownership of the tools of production, there are many varieties of proposals. But, while these programs of economic reform show much diversity of thought and opinion, they never-

theless have a common basis. All rest upon the belief that the economic and social conditions of American life demand improvement, — all are programs of social progress.

Justification of Progress. — After all, then, these diverse plans of economic reform have a unity of purpose, — a desire to better the condition of the worker. ^{What is} Their advocates, who believe absolutely in the ^{progress?} attainment of progress, are sharply distinguished from those reactionaries who believe that, "Whatever is, is right." These progressive thinkers are not content with "well enough"; they are always striving for "something better." Progress is the goal of all their activities. ^{But} what is social progress? It is the forward movement of all members of society, — not the mere advance of particular individuals. From an economic standpoint, ~~progress~~ progress is measured by individual and social welfare, and the test of this welfare is individual and social prosperity. Thus, progress is not only the goal of economic endeavor, but it is also the goal of economic reform.

What reason have men for believing that social progress is possible? To answer this question, one must understand the character of the forces at work in shaping ^{Its basis:} the destinies of life. Broadly speaking, these ^{Influence of} forces are those of heredity and environment. ^{environment.} Every one's life is a product of these two forces. Man is thus a combination of inherited traits and acquired characteristics. But which of these two sets of forces is the dominating element in the life of man? One's attitude on this question determines one's philosophy of life. The advocate of progress bases his belief on the dominating influence of social environment.

The effect of the opposite view — that man's course is chiefly determined by physical and mental heredity — is at once apparent. If this be true, progress in many cases is impossible of attainment. According to this belief, men may be born vicious, and their offspring destined by the laws of heredity to remain so from generation to generation. This represents the old fatalistic attitude towards life. So long as men believed that the evils of the past were transmitted to the present, social progress was practically impossible. There was no possibility of going into the past and influencing the parents of the present generation. This present generation, depraved because of the depravity of its ancestors, must in its turn hand on its low standards to the generations of the future. Thus the process would be endlessly continued through years of hopeless despondency. This old belief in hereditary depravity kept society from properly educating the child, prevented normal care of the criminal and social outcast, and, in every direction, restricted individual and social betterment.

The new view, however, is full of hope and promise. The modern social thinker has shaken himself free from the old fatalistic belief in the inheritance of acquired characteristics; and announces fearlessly that, since he believes that only inborn traits are usually inherited, the vast majority of social evils which beset mankind are not the product of heredity, but are generated largely by the social environment. This view, by emphasizing the fact that most men are normal, makes progress possible. It forms the basis of a new optimism and is characteristic of the attitude of the modern social worker. According to this belief, social and economic conditions may be improved largely by improving man's environment. The funda-

mental evil lies not in the individual, but in conditions surrounding him. If bad living and working conditions are responsible for misery and vice, the surroundings of the worker must be improved. Instead of the past, the present must be investigated. Each generation starts afresh, and, by improving its surroundings, rises to a higher level of social welfare than that reached by its predecessor. Thus social progress is attained through economic betterment.

The other side of this conviction, that improvement in environing conditions will alleviate misery and vice, is expressed, of course, in the belief in man's natural capacity. These convictions are complementary. Man himself is believed to be thoroughly capable of improvement, and this belief furnishes a real basis for progress. This concept of natural capacity dominates the thought of a progressive society. If people were born with a fatalistic curse upon their heads, if total depravity were an inherited thing — the product of the degeneracy of past ages — progress would hardly be possible. During the centuries when such ideas were held, but little progress in the condition of the masses was made, because each person felt the impossibility of a forward social movement. Recent years, however, have seen a distinct change in this respect. Thinkers now vigorously maintain the possibility of improvement; they have turned from the argument of "total depravity" to that of "natural capacity."

Requisites of Progress. — If, then, man is capable of improvement and progressive development, what is required to call this forth? In the first place, he must be given opportunity. This was emphasized at the outset of our study, and it is now restated in its closing

*Belief in
natural
capacity.*

*The ideals:
Opportunity.*

pages. Equal opportunity, however, means neither equality nor identity. An embryotic painter and an embryotic engineer are neither equal nor identical, yet each may be afforded an equal chance to develop his particular talent. Thus, equal opportunity means simply an equal chance to advance and is advocated, regardless of any particular program of reform, by all believers in progress. If, to-day, nine-tenths of the men and women about us are born approximately normal and naturally capable, they will all be competent to progress when given equal opportunities.

But something more than opportunity is essential to social progress. Society needs adjustment. In order to secure this universality of opportunity which will permit of individual development, changes must be made in environing conditions. Families are underfed and badly housed; children are sent into the mills at fourteen; the school system is not planned primarily for the worker; men die at an early age because of industrial accidents and preventable diseases. These maladjustments which are responsible for lack of opportunity must be swept aside. No conscious will has placed obstacles in the way of man's development; and, through adjustment, society itself must remove them wherever they exist.

Of equal importance with opportunity and adjustment is efficiency. When society provides the first two elements efficiency will normally follow. In all directions the cry of efficiency is heard. If progress is to be attained, society as well as individuals must develop the capacity to produce maximum results with minimum outlays. In the factory, in the home, in the school, in the nation — everywhere — efficiency is equally essential. All programs of genuine progress emphasize this as one of the

foundation stones of progress. Efficiency, of course, is attained through some form of industrial education. Thus, the economic importance of education becomes at once apparent. Efficiency, as we have previously seen, also involves conservation.

With the attainment of opportunity, adjustment, and efficiency, come other ideals of progress. Chief among these are leisure, recreation, and health. Without free activity, progress is not possible. In- *Leisure.*dividuals must have spare time in which to do those things that it is impossible to accomplish in the rush of industrial life. The great achievements of the world are often the products of leisure time. When men and women are educated to a wise use of free time, a shorter working day will prove of inestimable advantage to true progress.

Along with the requisite of leisure comes the chance for recreation. To be progressive — to be able to move forward in the affairs of life — man must have some relief from the strain of industry. This is *Recreation.* afforded through proper facilities for recreation. Thus, realizing that recreation is an ideal of true progress, municipalities every year appropriate large sums of money for playgrounds, parks, and recreation piers; while in many directions attempts are being made to regulate theatrical performances and motion picture exhibitions. At the same time, society is directing its efforts toward providing some legitimate form of recreation for rural districts.

Another ideal absolutely essential to progress is that of health. It is, in some respects, the most vital of them all. Without a strong, robust body, life is often un- *Health.*desirable if not impossible. In every program of social progress, therefore, full provision should be made

to develop and maintain sound health. The social worker, to-day, realizes the necessity for this ideal more than any other reformer. In early times, men often believed that disease came as a punishment for wrongdoing and was an evidence of divine wrath. This was a remnant of the old fatalistic attitude toward life. To-day, men have scientifically demonstrated that, not offended deities, but germs and bacteria are the cause of sickness and disease. Malaria is not carried through the air in the form of a vapor, but is transmitted through the sting of a mosquito. Remedy for malaria, therefore, takes the form, not of sacrificial offerings, but of a generous application of crude oil to the marshes and ponds in which the mosquito breeds. Thus, science puts to rout the old fatalism, and helps in the cause of social progress.

Concerning these ideals of progress all reformers are in practical accord. All would move in the same direction, with the same general end in view. It is not **The method.** the end — the goal of progress — upon which social reformers differ; it is the means — the method of attaining their ultimate desire. But even here there is some agreement, — some measure of unison. This manifests itself chiefly in one direction. It is generally admitted that social progress should be attained, not through rapid revolution, but through gradual evolution. Sudden disturbances seldom effect permanent changes. Through the slow process of time, extending over many generations and even centuries, progress is attained. To be sure, revolutions do occur; and, when they take place, thought and discussion are provoked. Nevertheless, no one can reasonably maintain that an economic or social revolution will immediately and permanently change habits of thought

crystallized for centuries in national character. The incoming of the factory system and the enunciation of Darwin's concept of evolution are good illustrations of revolutionary changes in economic belief and social thought. Yet, in both these cases, the corresponding change in popular opinion required years of education for its completion. So, inevitably, it must be with any fundamental reform instituted in behalf of social progress. Revolution is uncertain; evolution is unfailing.

QUESTIONS FOR RECITATION

1. What is the relation between economic reform and social progress?
2. Define progress. What is meant by the term "reactionaries"?
3. What reasons have men for believing that social progress is possible? Did Malthus believe in progress? Explain.
4. Explain the two forces at work in the life of every individual.
5. How does the biological belief in the non-inheritance of acquired characteristics affect one's belief in progress?
6. What is fatalism? What lies at the basis of this belief? How does it handicap social progress?
7. Give some illustrations of belief in fatalism at work in human history.
8. Distinguish between physical and social environment. Which is the advocate of progress most interested in? Why?
9. If, biologically, acquired characteristics are not usually inherited, how can social conditions improve from generation to generation?
10. What is the doctrine of total depravity? What are its consequences?
11. How is the idea of natural capacity linked with the theory of the dominating influence of social environment?
12. Name the requisites of progress. If compelled to, which would you eliminate?
13. Show the relation between opportunity and social adjustment.

14. Give some illustrations of needed social adjustments.
15. Explain how efficiency may be attained. How it may be over-emphasized?
16. Show the relation between leisure and recreation. Why are they included in the requisites of progress?
17. Give definite examples of how society may improve the health and life of the community. How may the individual help in this direction?
18. What similarity exists in all sane programs of economic reform?
19. Why is revolution unsatisfactory, if not harmful, in dealing with economic and social abuses?

PROBLEMS FOR DISCUSSION

1. Discuss your idea of progress.
2. What part does the social environment play in progress? Give examples.
3. Why are modern thinkers optimistic?
4. What is meant by the expression "environment is plastic"?
5. What basis does the belief in natural capacity furnish for optimism?
6. What part will opportunity play in progress? Give illustrations.
7. What measures are being taken to-day to prevent infant mortality? Premature employment? Why?
8. What steps are being taken to accomplish a better distribution of population in this country? Why?
9. What are some of the leading lines of activity in social work now being undertaken in America?
10. Which is more important, approximate equality of possessions, or approximate equality of opportunity? Do we have to destroy the present order of things to secure the latter?
11. With a more general diffusion of knowledge, culture, and publicity, is political democracy in more or less danger? Is equality of opportunity more or less likely to ensue?
12. Discuss "eclecticism" in social and economic reform.
13. What is meant by "meliorism"?

14. Explain why the evolutionary method is necessary in bringing about social changes.
15. Why is revolution ever resorted to?
16. How are economic reforms brought about in the United States? Give examples.

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